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ABSTRACT

Evaluations of the three years of the Fond du Lac public school system experience-based career education (EBCE) project are described in this three-part report. The two major sections of each evaluation are assessments of the achievement of student outcome objectives and of process objectives based on data collected through the use of standardized tests of reading and math skills and attitudes toward work, school, career decision making, and sex role stereotyping; Appalachian Education Laboratory (AEL) instruments for EBCE; other instruments; and interviews. Specific objectives are used as the headings for evaluation results and data analysis. The student outcome objectives are academic achievement; acquisition of career knowledge and maturity; development of positive attitudes toward learning environments, themselves, others, and work; less sex role stereotyping; and job satisfaction of program graduates. The process objectives are utilization of EBCE management by objectives, development of a public information mechanism, use of AEL concepts and objectives and interdisciplinary activity sheets to document student progress, development of individualized student programs, use of student career guides, personnel training, student placement, and confrontation and dealing with sex role stereotyping. Tables for statistical analysis, followup of graduates' attitudes, item analysis of dissemination workshops, and instruments are appended. (YLB)

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THIRD PARTY EVALUATIONS

Experience Based Career Education Project
Fond du Lac School District
Project Number 1 39 600 5450 A
Grant Number G 05 76 00213

BY

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Experience Based Career Education Project
Fond du Lac Public School System YEAR 1
Project Number 502-AH-60042
(Grant Number G05-76-00213)

by

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August, 1977

EXPERIENCE BASED CAREER EDUCATION PROJECT
FOND DU LAC PUBLIC SCHOOL SYSTEM

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SUMMARY

The purpose of the Third Party Evaluation for the Fond du Lac, Wisconsin Experience Based Career Education (EBCE) Project was to certify the degree to which the project's objectives were met.

The objectives included assessment of numerous student-outcome objectives, process objectives and their impact on the total project, as well as assessment of the project management plan. An evaluation matrix was used to relate specific student-outcome behavioral objectives and process objectives with an evaluator's design, statistical comparison, the activity involved, and tentative date of measurement.

Data were collected through the use of standardized reading and math tests, AEL instruments for EBCE, and interviews. Interviews were conducted with students, parents, resource persons and project staff.

It was found that participation in EBCE did not have negative effects on students' acquisition of reading and math skills. Through EBCE, students gained more knowledge of occupations, maturity in working with employers and employees, and insights on the relationships of education and work. EBCE also had a significant impact on reducing sex role stereotyping.

In their interviews with third party evaluators, EBCE students demonstrated greater composure and enthusiasm as well as ability to converse confidently and effectively with adults than did the comparison students. They also expressed positive attitudes toward other workers at their job sites, citing many instances of mutual interest and helpfulness. Positive attitudes toward work itself were reflected by EBCE students' verbal statements, their excellent job attendance records, and endorsement by resource persons.

Students and their parents had very positive opinions of EBCE. Students thought that it provided a much more relevant experience. Parents concluded that their children learned more in general and about the world of work from EBCE.

Resource persons from business and industry also gave EBCE a favorable evaluation. They thought that the EBCE students were interested in their work and the work site.

Also, resource persons reported that the presence of EBCE students had positive impacts on their employees. Participation in the EBCE program indicated a concern for the community and its young people. This had a positive impact on employees.

The EBCE project has a strong staff which has very good team work. It has excellent direction from Ron Nelson.

EVALUATION ACTIVITIES

At the close of the contract year, June 30, 1977, the third party evaluators had conducted four on-site visits, processed and analyzed pre- and post-test data, reviewed a sample of documents produced by the project, and aided in revision of survey instruments for students, parents, and resource persons. Subjective data were generated by on-site observation and interviews with EBCE project staff, Goodrich High School officials, experience-site resource persons, community leaders, the citizens' committee, parents, and EBCE and control-group students. Analysis of pre- and post-test data from commercially published tests and AEL EBCE instruments provided information on the impacts on math and reading skills, attitudes toward work and school, career decision making, and sex role stereotyping. A copy of the AEL instruments is included in Appendix A.

Pre-test data were collected at the beginning of semester II (last part of January, 1977). Post-test data were collected during the last week of May and first week of June. Data analysis techniques used will be discussed with the results in the next section.

ACCOMPLISHMENT OF STUDENT OUTCOME OBJECTIVES

1.1 EBCE students do as well in academic skills as well as comparison group students.

Two measures of basic skills were used in this year's evaluation. The CTB reading comprehension and mathematics concepts and applications test were used. Pre-tests were administered to the EBCE and control groups at the beginning of semester two, 1976-77, and again at the end of the semester. An analysis of the results is presented in the following paragraphs.

Reading. The CTBS reading comprehension test involves students in reading paragraphs, articles, and letters. Based on the information in these, they respond to questions which measure their ability to isolate main ideas, skill in developing conclusions, and ability to recall information.

The results for the pre- and post-test are given in Table 1. A review of the mean scores presented in Table 1 indicates that there was little difference in the pre-test means for boys and girls in both groups. The means ranged from 31.7 to 32.3 on the pre-test. Statistical analysis of the pre-test scores with a two-way analysis of variance revealed no significant difference between the EBCE and the control group and between males and females.

The post-test means were also very similar. They ranged from 32.5 to 33.6. An analysis of variance on the post-test scores revealed no significant differences between groups or males and females. (The Analysis of Variance tables are presented in Appendix B.) There was a slight amount of growth in scores from the pre- to post-test. The time span between two testing periods was approximately five months.

The mean for twelfth graders tested in January for the national norms for this test is given in Table 1. The EBCE and comparison groups average scores are at the national average. A review of the norms for spring test dates indicated that the usual growth is about .5 raw score points. This is approximately the same amount of growth as observed in the EBCE and comparison groups. Based on the fact that no significant differences were found between the EBCE and control groups in reading ability, it was the conclusion of the third party evaluators that participation in EBCE did not have a detrimental effect on the acquisition of reading skills.

Table 1

Pre- and Post-Test Results for CTBS Reading Test

Group	Pre-test		Post-test		
	$\bar{X}$	SD	$\bar{X}$	SD	N
EBCE - Girls	31.7	10.0	32.5	8.4	23
Control - Girls	31.8	7.9	33.0	9.9	14
EBCE - Boys	32.3	6.5	32.5	6.9	33
Control - Boys	32.0	7.2	33.6	7.8	25

National Norms for grade 12: Mean ($\bar{X}$) = 32.0

Table 2

Pre- and Post-Test Results for CTBS Math

Group	Pre-test		Post-test		
	$\bar{X}$	SD	$\bar{X}$	SD	N
EBCE - Girls	36.6	10.1	36.8	11.2	23
Control - Girls	32.3	12.3	34.7	10.3	14
EBCE - Boys	37.6	7.2	35.6	7.7	33
Control - Boys	37.1	10.5	39.8	9.3	25

National Norms for grade 12: Mean ($\bar{X}$) = 34.0

Mathematics. The CTBS mathematics applications and concepts test measures the student's ability to apply appropriate mathematics concepts or techniques to problems given in the test. Students work problems presented in the test and select the correct answer from a list of answers given. The items are in a multiple choice format.

The results of the mathematics pre- and post-tests are given in Table 2. Although the means are somewhat different, an analysis of variance revealed no statistically significant differences among the pre-test means. The F values for the analysis did not approach significance at the .05 level. (See Appendix B for these analyses.)

An analysis of variance run on the post-test means also indicated no significant differences. Although there were no statistically significant differences between groups on the post-test the trend patterns suggested that the boys in EBCE group may have experienced a less effective environment for acquiring these skills. Whereas the boys and girls in the control group and the EBCE girls increased their math scores from pre- to post-test, the EBCE boys showed a decline in performance. This might be attributable to chance measurement factors. However, it might also be caused by characteristics of the EBCE program.

It was the conclusion of the third party evaluators that participation in the EBCE program did not have a detrimental effect on the acquisition of math skills. Because of the data trends observed, it is recommended that the EBCE project staff monitor the extent and type of mathematics experiences provided in the EBCE program. This is especially important for the boys in the program. If the same patterns emerge during the next year of the project, further analysis of the program should be made and appropriate action taken.

1.2 EBCE students will acquire greater career knowledge than will the comparison groups of students.

Student Evaluation. At the close of the school year, the EBCE students were asked to complete a survey form. This survey form is essentially the same as the one developed by AEL. Table 3 presents the results concerned with the impacts of EBCE on career knowledge and decision making. All of the students in the programs felt that EBCE helped them gain knowledge of the world of work (Item 2). All but 2 percent of the EBCE students felt that their experiences in the program had helped them improve their capabilities to plan their future (Item 3).

Further information on the impacts of the EBCE experience on career knowledge is given in Table 4. Most of the students (98%) felt that the resource persons provided at least some help in assessing their potential in the job in which they were participating (Item 25). A large majority (93%) also felt that the resource persons had opened up new ideas of potential interest to them (Item 26). All of the EBCE students responded that they had usually been able to do as much hands-on work on their site as they had anticipated (Item 23).

Slightly more than one-third of the EBCE students indicated that their summer employment was to some extent the result of their EBCE experience (Item 39 in Table 5). Approximately two-thirds of the students responded that their EBCE experiences influenced their decision on further college or vocational school preparation during the coming years (Item 41). The summer employment plans and future advanced training plans of the EBCE students are also given in Table 5.

Table 3

Student Evaluation of The Impacts of the EBCE Program On Career Knowledge and Decision Making

Statement	Responses					
	(1) No		(2) Somewhat		(3) Yes	
	N	%	N	%	N	%
2. Do you feel EBCE has helped you gain significant knowledge of the world of work?	0	0	5	9	51	91
3. Do you feel EBCE has helped you develop the capabilities to plan your future?	1	2	13	23	42	75
4. Do you feel EBCE has helped you to learn to handle and solve some of the problems you may meet trying to reach future goals?	1	2	18	32	37	66
5. Do you feel EBCE has helped you learn to appraise your own interests and abilities and realistically relate them to a career?	1	2	17	30	38	68

Table 4

Student Evaluation of Resource Persons

Statement	Responses							
	(1) Never		(2) Sometimes		(3) Usually		(4) Always	
	N	%	N	%	N	%	N	%
20. Do you feel that your resource person(s) were in favor of the EBCE program and felt their time spent working with you was worthwhile?	0	0	3	5	35	63	18	32
21. Do you think your resource person(s) knew what was expected of them from the EBCE program?	0	0	22	39	27	48	7	13
22. In your opinion, did your resource person do a thorough job explaining their jobs to you?	0	0	5	9	28	50	23	41
23. Were you generally able to do as much "hands-on" work as you had expected and felt you showed the ability to do?	0	0	5	9	28	50	23	41
24. Do you think you were given fair and accurate evaluations by your resource person(s)?	1	2	5	9	30	54	20	36
25. Do you feel your resource person(s) helped you to realistically assess your future in a job such as theirs?	1	2	9	16	31	55	15	27
26. Did your resource person(s) open up any new areas of career interest to you?	4	7	21	38	16	29	15	27

Table 5

Impact of EBCE Experiences on Summer Employment and Future Educational Plans

Statement	Responses	
	N	%
38. Are you employed for this summer, either full or part-time?		
(1) Yes, full time	26	46
(2) Yes, part-time	22	39
(3) No	9	16
39. Was that job the result of an EBCE experience?		
(1) Yes	14	25
(2) To some extent	6	11
(3) No	36	64
40. Are you planning to attend college or a vocational school this next year?		
(1) Yes, college	14	25
(2) Yes, vocational training school	19	34
(3) Yes, other	4	7
(4) Undecided	8	14
(5) No	10	18
41. If so, did EBCE influence your decision?		
(1) Yes, very much	14	25
(2) Yes, somewhat	21	38
(3) Not sure	4	7
(4) No	14	25

Employer Survey. Resource persons were surveyed to determine the types of experiences provided on the job and the supportive services provided by them. The types of activities in which students engaged at the work sites are listed in Table 6. High levels of interaction were reported between the resource persons, employees and EBCE students (See items 19 and 20). The average response for these two activities falls in the range between occasionally and frequently. The highest levels of activity reported were observing site activities (Item 16) and actively performing site activities (Item 18). Both of these activities had average responses of 3.6 which fall in the "frequently" category. Individual study (Item 21) and researching from site materials (Item 17) were utilized less frequently.

The types of instructional supportive services provided by the resource persons are reported in Table 7. The most frequently used activities were talking about activities at the site (Item 9) and assisting students in performing a specific job related task at the site (Item 13). Both of these activities fell in the "frequently used" category. Discussing job opportunities with the student (Item 7), evaluating the student's assignments (Item 11), and assisting students in planning their assignments (Item 14) were reported as being done "occasionally." Resource persons reported that they seldom assisted students in non-job related assignments (Item 12), tutoring in an academic area (Item 10) and discussing students' personal problems (Item 8). The standard deviations in the range of 1 indicate some variation in the level of these activities reported by the resource persons. However, the standard deviations of .5 and .7 reported for most frequently used activities would indicate a fairly consistent pattern or utilization of these by all resource persons.

Table 6

Student Work Site Experiences As Described By Resource Persons

How do students spend their time at your site?	Responses		
	$\bar{X}$	SD	N
16. Observing site activities	3.6	0.6	86
17. Researching from site materials	2.9	0.9	85
18. Actively performing site activities	3.6	0.6	85
19. Talking with me	3.5	0.7	86
20. Talking with other site personnel	3.4	0.7	85
21. Individual study	2.5	0.8	78
22. Other	2.6	1.5	8

Key:

Frequently = 4
Occasionally = 3
Seldom = 2
Never = 1

Table 7

Supported Services Provided to EBCE Students By Resource Persons

Statement	Responses		
	$\bar{X}$	SD	N
7. Do you talk about job opportunities?	3.0	0.7	86
8. Do you talk about the students' personal problems?	2.1	1.0	84
9. Do you talk about activities at your site?	3.7	0.5	86
10. Do you tutor in an academic area?	2.1	1.0	84
11. Do you evaluate individual students' assignments?	2.9	1.1	84
12. Do you assist students in non job related assignments?	2.0	1.0	83
13. Do you supervise students to perform a specific job-related task as your site?	3.6	0.7	86
14. Do you help plan student assignments?	3.2	1.5	4

Key: Frequently = 4 Seldom = 2
Occasionally = 3 Never = 1

The on-site observations and interviews conducted by the third party evaluators concurred with the reports of the resource persons in the types of assistance and service being given to students. The data reported from the employers' survey indicated that the resource persons had a genuine concern for the EBCE students and did spend time with them in various activities. Moreover, the EBCE students were allowed to gain hands on experience with various tasks and jobs at the site.

Interview Data. Both groups of students agree that greater career knowledge is gained through first hand experience with specific jobs and/or job clusters, than can be gained through discussion, media presentations, or simulated job experience. One Goodrich High student in the comparison group concluded, and others agreed, that while Goodrich provided them with abundant career information, "Hearing or reading or seeing a film about working just can't equal the real thing."

EBCE students perceived opportunity to observe and talk to other persons in their normal work environment over a period of several days or weeks as an additional source of knowledge about careers and their effect on people.

Resource persons appear to be doing an excellent job of showing students the role that each psoition plays in the functioning of the entire scope of operation. As a result, EBCE students were introduced to many more types of jobs within a single site placement than the job for which they were placed. Work sites are judged unacceptable by EBCE staff if resource persons limit the amount of student involvement in actual hands-on work experience.

Comparison group students said that while many of them have part-time work experience, little attempt is made on those jobs to show them how what they do relates to the business as a whole.

Based on observations and data gathered through interviews during on-site visits, it is the opinion of the third party evaluators that students participating in EBCE have gained a greater degree of career knowledge than the comparison group at Goodrich High School.

1.3 EBCE students will acquire greater career maturity than will the comparison group students.

CMI Attitude Scale. The career maturity attitude scale was administered as a pre- and post-test to the EBCE and control groups. The attitude scale measures the feelings and attitudes students have toward making a career choice and entering the world of work. Higher scores on the scale indicate more career maturity. It has also been found that higher scores are related to more realistic and definitive career choices.

The pre- and post-test results are given in Table 8. On the pre-test the girls in both groups scored significantly higher than the boys ($P < .05$). The girls in the control group scored significantly higher than the students in the other three groups on the post-test ($P < .05$). The mean scores on the post-test were very similar to the mean scores for the national norms.

During the time between the pre- and post-tests, the scores for the boys in both groups increased slightly indicating a small growth in maturity. In this same time period, the scores for the girls in the control groups increased noticeably (3.2 points). This would indicate that the girls in the control group had more realistic and definitive career

Table 8

Mean Scores on Career Maturity Inventory (CMI) Attitude Scale

Group	Pre-test		Post-test		
	$\bar{X}$	SD	$\bar{X}$	SD	N
EBCE - Girls	37.4	3.4	35.8	8.9	23
Control - Girls	37.3	4.4	40.5	3.1	14
EBCE - Boys	35.1	5.2	36.0	4.5	33
Control - Boys	32.8	6.2	34.4	5.9	25

National Norms for Grade 12: $\bar{X}$ = 37.2
SD = 4.9

	● Girls had significantly higher scores than boys, P < .05	● Girls in the control group had scores significantly higher than those in the other groups, P < .05

choices than on the pre-test. However, it should be noted that this instrument is based on current career choice stereotypes. Therefore, the fact that the girls in the EBCE group had a slight decrease, 1.6 points, in their mean scores would indicate that they had less certainty of career choice and were possibly reassessing their career selection. Research reported in the CMI manual (page 33) noted that attitude scale scores often decrease when students are entered in an environment which is new and unfamiliar. The on-site interviews revealed that many of the girls in the EBCE group were studying and participating new and often non-traditional occupations. Some reported that they had made significant changes in career choice as a result of their experiences. Thus, the decrease in the EBCE girls CMI attitude scores may reflect that they were in the process of reassessing their career choices and developing new approach to career decision making.

Student Survey. EBCE students reported that their experiences in the program helped them to learn how to handle and solve problems they might encounter while working to achieve future goals (Item 4 in Table 3). They also indicated that EBCE had helped them to learn how to appraise their own interests and abilities and realistically relate them to a career (Item 5 in Table 3). The responses of the students on this survey concurred with the findings of the third party evaluators during the on-site visits.

Interview Data. Students in both the EBCE and comparison groups were aided and encouraged to look at themselves from many perspectives to develop a realistic self-view of ability and interests with respect to career choice. It is generally assumed that exposure to actual work situations shows the distinction between fantasy and reality with respect to various aspects of a particular job, and thus serves to advance career maturity. Since EBCE students had access to a greater number and diversity of jobs as well as access to jobs of their choice, it is judged that they thus gained a greater degree of career maturity than did their counterparts in the comparison group at Goodrich High School. Opportunity for students in the comparison group to develop career maturity in this way was limited first by the narrow range of part-time job types in which high school students are employed, and second, by the often intense competition for those jobs.

A limited number of EBCE students initially could or would not see their own limitations for certain job requirements but were allowed nonetheless to select work sites which were not appropriate for their abilities. Learning coordinators provided follow-up exploration with such students in analyzing why a job experience was successful or not. Subsequently having to face the dichotomy between their abilities and the job requirements was a painful but meaningful step in the career maturity process. Learning coordinators examined with the students ways in which the limitation or weakness could be overcome. If it could not be overcome, students were then helped to identify related career choices in which the individual's limitation(s) would have little or no impact.

It is the conclusion of the third party evaluators that the EBCE students did acquire greater career maturity and were developing a more rational process and expanded informational basis for their career decision making.

1.4 EBCE students will develop more positive attitudes toward learning environments, themselves, others, and work than will the comparison group students .

Student Attitude Survey Results. The Student Attitude Survey developed by Research For Schools, Inc. measures students' attitudes toward their school program, instructional materials, and school facilities. It also assesses their self concept, attitude toward others and feelings toward work.

The results of the pre- and post-test on the Student Attitude Survey are given in Table 9. The mean scores for girls were significantly higher than those for the boys on the pre-test. An analysis of variance run on the post-test scores indicated no significant differences (See Appendix B for the analysis of variance tables). Since there were differences between boys and girls on the pre-test and none on the post-test, an analysis of covariance was run. No significant differences were found in this analysis. In addition, a t test was run to determine if any of the decreases in the mean scores between pre- and post-tests were significant. None were statistically significant. The large variability and changes in the scores made it necessary to have a large difference in means in order to have a statistically significant difference.

On the pre-test all of the mean scores were in the positive range. On the post-test all of the means except the one for the control group were very near or in the positive range. The mean score for the control group was in the undecided or mixed attitudes area. Several reasons may underlie the general decrease in students' attitudes toward school, work and self over the time period involved in this assessment. At graduation time, students may take a more conservative view of their school and their attitudes toward work. Graduation is also a time of reassessment and a

Table 9

EBCE and Control Group Students' Attitudes Toward School As Measured by the Student Attitude Survey

Group	Pre-test		Post-test		
	$\bar{X}$	SD	$\bar{X}$	SD	N
EBCE - Girls	292.7 #	28.8	280.4	23.1	23
Control - Girls	301.8	16.8	277.4	13.3	14
EBCE - Boys	285.2	31.2	282.5	22.9	33
Control - Boys	282.4	30.0	264.5	18.0	25
	● Girls had more positive attitudes (P < .05)		● No significant difference		

#Key: Scores between 280 and 360 are in the positive range on the scale. Scores between 200 and 280 are in the undecided and/or mixed attitude range.

period of uncertainty. These conditions may have caused the students to respond less favorably on the Student Attitude Survey.

Interview Data. Interviews with students in both groups indicated that participation in EBCE has provided motivation to view the school as a resource to draw upon to a greater degree for knowledge and/or skills needed in their jobs. Having persons on the job tell students how much math, writing skill, etc., is needed to perform specific job tasks has given education new relevance to them. Students in the comparative group, on the other hand, tended to perceive school as a "holding pattern" in the last semester of their senior year.

In their interviews with third party evaluators, EBCE students demonstrated greater composure and enthusiasm as well as ability to converse confidently and effectively with adults than did the comparison students. They also expressed positive attitudes toward other workers at their job sites, citing many instances of mutual interest and helpfulness. Positive attitudes toward work itself were reflected by EBCE students' verbal statements, their excellent job attendance records, and endorsement by resource persons.

Based on the interview data and the trends in response patterns on the Student Attitude Scale, the third party evaluators concluded that this objective had been met.

1.5 EBCE students will exhibit less sex-role stereotyping than will the comparison groups of students.

Socialization Profile Results. Students in the EBCE and control groups completed the Socialization Profile in January and again in May. The Socialization Profile is a semantic differential instrument with 36 bi-polar items. The student selects a response between the two statements given in each item. Each statement is scored on a scale from 1 to 7. An example of the statement would be the following:

Strong dislike for the color red 1...2...3...4...5...6...7... Strong liking for the color red

On this instrument students were asked to respond how they perceived the adult male. They put a slash on the scale and marked an M above it. After they had completed the 36 statements based on their perception of males, they went through the same statements again and marked where they perceived females would be on each of the items. The Socialization Profile measures the students' perceptions of male and female aggressiveness, self-direction, self-sufficiency, and competence in business affairs.

Table 10 presents the pre- and post-test perceptions of the EBCE and control group students related to females. On the pre-test, girls rated females as being significantly more aggressive, self sufficient, active and involved ($P < .05$). On the post-test, there was no significant difference between the boys and girls perceptions of females. The difference in perception between the EBCE and control groups approached significance ($P = .07$). An analysis of covariance did not reveal any significant differences between boys and girls or the EBCE and control groups. The boys and girls in the EBCE group increased their rating for females. In other words, they rated them as being more aggressive, self-sufficient, etc. on the post-test. Also, there was a tendency for the EBCE boys and girls ratings to become more similar on the post-test. Girls in the control group tended to decrease their ratings, rate women as less aggressive, less self-directed, etc. on the post-test. These

Table 10

EBCE and Control Group Students' Perceptions of Females

Group	Pre-test		Post-test		
	$\bar{X}$	SD	$\bar{X}$	SD	N
EBCE - Girls	131.9#	12.1	133.3	13.8	23
Control - Girls	131.2	10.2	128.6	11.0	14
EBCE - Boys	125.1	17.4	129.5	16.7	33
Control - Boys	122.4	25.2	123.4	13.7	25
# High Score indicate more aggressive, self-directed, self-sufficient and competence in business affairs. Minimum possible score = 36 Maximum possible score =252 Neutral Score = 144	Girls rate females as more aggressive, active, involved, etc. ($P < .05$) as contrasted with boys' ratings.		Probability of difference between EBCE and Control is .07. Analysis of covariance was not significant.		

results are graphically depicted in Figure 1. The lower set of data in Figure 1 represent the perceptions of adult females.

The EBCE and control group students perceptions of males are reported in Table 11. The boys rated the males as significantly more self-sufficient, competent in business affairs and aggressive on the pre-test as contrasted with the girls ratings ($P < .05$). On the post-test there was no significant difference between the ratings given by boys and girls in both groups. However, the trends indicated some changes in perceptions during the period between the pre- and post-test. Therefore, an analysis of covariance was run. In this analysis it was found that the EBCE students rated the males significantly lower than ($P < .01$) than the students in the control group. In other words, the EBCE students perceived males as being less aggressive, less self-sufficient and less competent in business affairs than the students in the control group. As noted in Figure 1, the opinions and perceptions of males held by the boys and girls in the EBCE group tended to converge. While students in the control group tended to rate the males more aggressive, self-sufficient and self-directed on the post-test as contrasted with the pre-test, students in the EBCE group reduced their mean ratings.

The results on the Socialization Profile indicated a statistically significant change in the EBCE students perceptions of the characteristics of males as contrasted with the students in the control group.

A review of Figure 1 quickly informs the reader that the perceptions of females and males are significantly different. Although there were statistically significant changes in the EBCE group, their perceptions of the nature of female and male adults are still markedly different. Additional educational experiences will be necessary to change these stereotypes.

Figure 1

Changes in Students' Role Perceptions of Men and Women

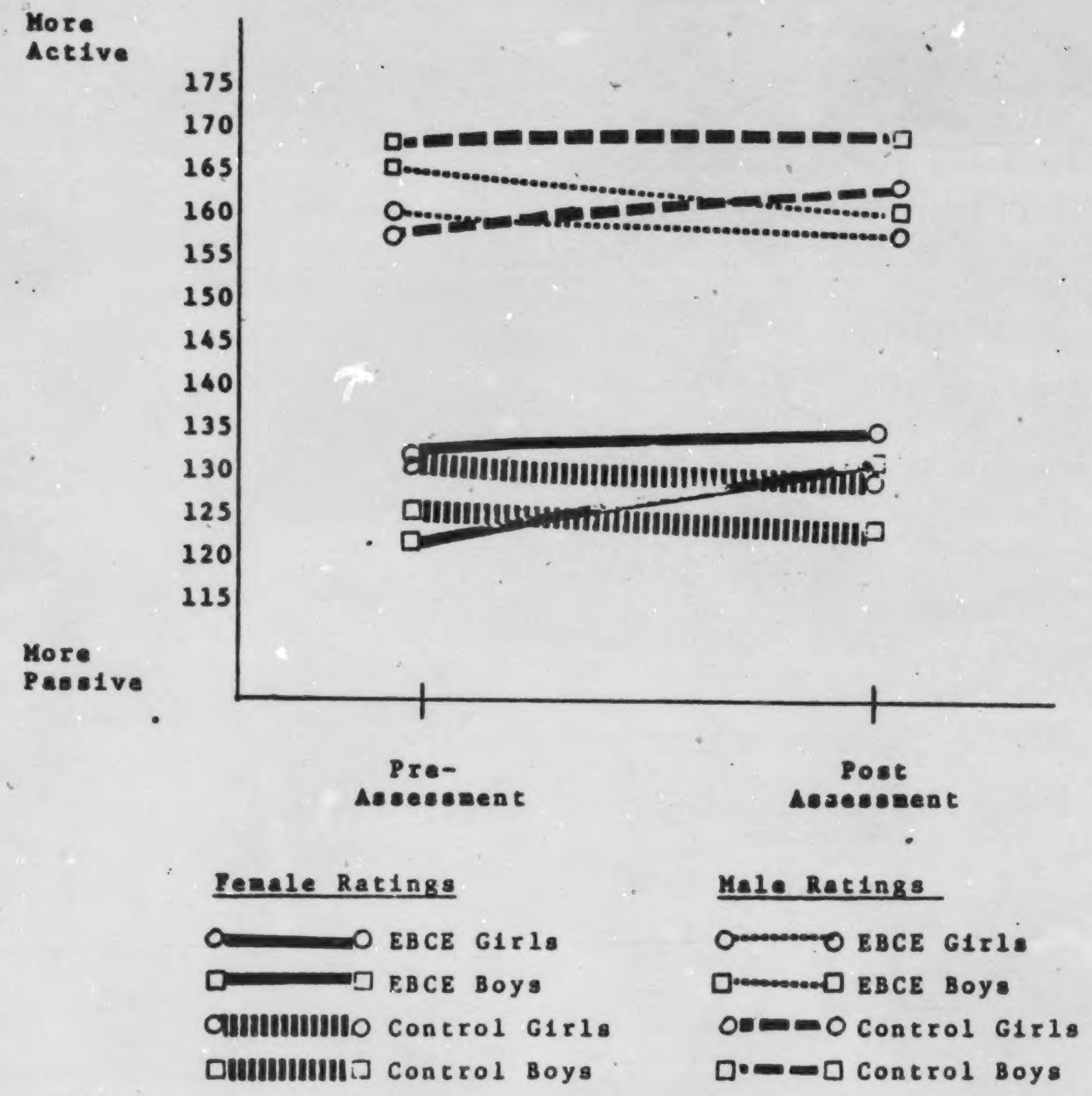

Table 11

EBCE and Control Group Students' Perceptions of Males

Group	Pre-test		Post-test		
	$\bar{X}$	SD	$\bar{X}$	SD	N
EBCE - Girls	160.0	10.3	158.4	12.1	23
Control - Girls	157.6	9.0	161.7	11.4	14
EBCE - Boys	165.3	13.8	159.9	15.4	33
Control - Boys	165.5	13.3	167.1	14.4	25
# High Scores indicate more aggressive, self-directed, self-sufficient and competence in business affairs. Minimum possible Score = 36 Maximum possible Score =252 Neutral Score = 144	Boys rate males as more aggressive, active, involved, etc. (P. < .05) as contrasted with girls' ratings.		Probability of Differences between EBCE and control groups was .06. Analysis of covariance revealed a significant difference between EBCE and control groups. (P < .01)		

Interview Data. Evidence exists that EBCE students are being encouraged and aided by EBCE staff in exposure to career experiences which extend beyond the restraints of sex role stereotyping. The placement and subsequent successful experience of a young woman student in an auto body shop was perceived as a real breakthrough by EBCE staff. The body shop owner had initially expressed skepticism about a woman's ability to perform shop work, as well as concern about the attitude of male employees toward her. The student had previously lacked courage to pursue a nontraditional job. Both parties found the placement successful and highly satisfying.

Interviews with students and resource persons suggest that there are more students willing to try nontraditional roles then there are employment situations ready to accept them, however. More placements of both male and female students at nontraditional work sites are needed since such placements remain the exception rather than the rule.

Comparitive group students have also discussed and received information on alleviating sex role stereotyping but again had the disadvantage of dealing with it on a theoretical basis only. Some EBCE students, on the other hand, experienced first-hand nontraditional jobs, and all EBCE had the opportunity to observe the role of gener and its social and economic implications among co-workers at each job site.

It is the judgment of the third party evaluators that this objective was met.

1.6 A follow-up on graduates of the EBCE program will reveal positive attitudes toward learning environments if they are enrolled in post-secondary educational programs, and job satisfaction if they are employed.

Achievement of this objective will be assessed during the second year of the EBCE project.

1.7 Parents of EBCE students will have positive attitudes toward the EBCE program.

Parent Survey. At the end of the school year, parents of EBCE students were asked to complete the Parent Survey. A copy of the Parent Survey is included in Appendix A. This instrument was developed by AEL. The results of the Parent Survey are reported in Table 12. Parents indicated that they received more information from their children on the EBCE program than they had on the regular program when their sons and daughters were enrolled in it (Item 4 and 14). (Note: A mean response of 3 on these items would indicate that the amount of information or the evaluation of the EBCE program was the same as the past school program in which the son or daughter had been enrolled. Means above 3.5 would indicate that the EBCE program received higher ratings. The standard deviation indicates the amount of consensus or agreement in the responses given by the parents. The standard deviations less than one indicate a high level of agreement.

The parents general impressions of the program were very favorable. Parents thought that the EBCE program was considerably better than the past school experiences (Item 1), that their children liked the EBCE program much better (Item 3) and that their children would enroll in the EBCE program if they had it to do over again (Item 2).

Table 12

EBCE Parents' Assessment of the EBCE Program

Statement	Responses	
	$\bar{X}$	SD
1. How well does the EBCE Program compare overall with the past school experiences of your daughter or son?	4.4#	0.8
2. If you had it to do over again, would you want your son or daughter to participate in the EBCE Program?	4.6	0.9
3. How well do you think your son or daughter likes the EBCE Program compared with past school experiences?	4.6	0.8
6. Have you received enough information about your son's or daughter's progress in the EBCE Program?	4.2	0.9
7. In comparison with regular schools, how much opportunity did the EBCE Program provide your daughter or son for learning about occupations?	4.9	0.6
8. What effect, if any, has the EBCE Program had on helping your son or daughter form career plans?	4.3	1.0
9. In comparison with regular schools, how much opportunity did the EBCE Program provide your daughter or son for general learning?	4.0	0.9

Table 12 Continued:	$\bar{X}$	SD
10. In comparison with past experiences in regular schools, how motivated is your daughter or son to learn in the EBCE Program?	4.4	0.8
11. How would you rate the approaches to learning used in the EBCE Program?	4.4	0.7
14. How often does your son or daughter talk to you about what's going on in the EBCE Program?	4.2	1.0
15. About how often have you had any contact with any EBCE Program staff members?	2.6	1.1
16. How many meetings have you attended during this school year where other parents of EBCE students were present?	1.8	1.0
17. How would you rate the general quality of the EBCE Program staff?	4.4	0.6
18. How would you rate the business or community resources available in the EBCE Program?	4.1	0.8
19. How would you rate your overall relationship with the staff of the EBCE Program?	4.4	0.8
20. How would you rate the enthusiasm of the EBCE Program staff?	4.9	0.4
Statement	%	N
21. What do you think of the occupational plans of your daughter or son?		
1. There aren't any firm plans yet	24%	9
2. The plans should be changed	3%	1

Table 12 Continued:	%	N
3. The plans seem to be good	73%	27
4. We haven't really had a chance to discuss the plans	0%	0
22. What do you think your son or daughter will be doing a year after high school?		
1. Working	43%	16
2. Attending some kind of college	35%	13
3. Going to a business or trade school	27%	10
4. Military	2%	1
5. Other	2%	1

Means and standard deviations are based on a response scale which ranged from 1 = much worse to 5 = much better. N = 37

Parents felt that the EBCE program provided their children with much more information and opportunity to learn about occupations (Item 7). Also, they responded that the EBCE program had a very good effect on the career plans of their children (Item 8). The amount of general learning required by the students in the EBCE program was also rated above that received from the typical school program by the parents (Item 9).

Parents thought that their children were considerably more motivated in the EBCE program as contrasted with the regular school program (Item 10). Also, they felt that the approaches to learning used in the EBCE program were good to excellent (Item 11).

Parents reported a small number of contacts with EBCE staff and other students in the EBCE programs (Items 15 and 16). The standard deviations on these two items were somewhat larger indicating that there was more variability in the number of contacts reported by the parents.

EBCE staff members received very high ratings by parents. Parents felt that the overall staff quality was good to excellent (Item 17). Parents said that their relationship with the EBCE staff was excellent (Item 19). Also, they reported that the EBCE staff had a high level of enthusiasm (Item 20). The small standard deviations on these three items indicate that there was a high level of consensus among the parents concerning these three characteristics of the EBCE staff. The community and business resources available to the EBCE students received a high rating by the parents (Item 18) also.

Interviews with parents of students enrolled in the EBCE program as well as data from parent attitude surveys suggest that parents have very positive attitudes about the value of EBCE to their children as well as to the community.

Parents expressed satisfaction with the qualities of personal maturity the EBCE experience has promoted in their children and with its availability as an alternative for students who were tired of the sameness of educational delivery style. Parents felt that participation in EBCE provided their children with realistic experiences to help sort out and prioritize vocational interests and abilities as opposed to avocational ones. Parents expressed the opinion that the program was as valuable--if not of even greater value--to the college-bound student as to the non-college bound.

This objective was met by the EBCE program.

1.8 Experience-site resource person and contact persons will have positive attitudes toward the EBCE program.

Employer Questionnaire. The employer questionnaire developed by AEL was sent to each of the participating businesses and industries in the Fond du Lac area. The questionnaire requested the resource persons to provide information on the impacts of the EBCE program on their companies, their evaluation of the program, and other data needed in the administration of the program. The resource persons were very positive on the EBCE program. They felt that most of the students had been interested in their site assignment (Item 23 in Table 13). They also thought that the students involved in the EBCE program were interested in it (Item 24). It should be noted that some of the EBCE students were not interested in the work available on some site assignments. This is a natural part of this type of a career education program. One of the site interviews conducted by the third party evaluators involved a student who had determined that she was not interested in the jobs available in that business. The resource person at this site was aware of her feelings.

Table 13

Resource Persons' Evaluation of EBCE

Statement	Responses		
	$\bar{X}$	SD	N
23. Do you think the EBCE students have been interested in your site?	1.2	0.5	84
24. Based on the EBCE students placed at your site, do you feel these students were interested in the concept of EBCE?	1.2	0.5	85
27. Have you been satisfied with the feedback that you received relating to what happens to the students after he leaves your site?	2.0	0.8	71
28. Do you think your company will continue working with the EBCE project during the next couple of years?	1.3	0.5	84
30. Do you feel the program functioned as you were led to believe when you were recruited as an employer site?	1.3	0.6	84

Key:
1 = Yes
2 = Don't Know
3 = No

The resource persons concluded that the program had functioned as they were informed it would when they entered into it (Item 30) and that their company would continue working with the EBCE project (Item 28). However, they indicated that they would like to have more feedback on the students' evaluation of the experience and what happened to the EBCE students after they completed their site experience (Item 27).

Table 14 includes the impacts that the resource persons reported as a result of participating in the EBCE program. The resource persons reported some impact on the quality of work performed by regular employees (Item 35-36), and company training practices (Item 39-40). The values of these impacts were all reported to be good. These response patterns concurred with the feedback received through on-site interviews conducted by the third party evaluators. For example, one resource person reported that their regular employees were more highly motivated because they felt the company was concerned with the community and their children.

Students reported that their resource persons were in favor of the EBCE program (Item 20 in Table 4). Students also reported that the resource persons did a thorough job of explaining their work to them (Item 22 in Table 4) and that they gave the EBCE student fair and accurate evaluations (Item 24 in Table 4). The student evaluations agree with the feedback received from the resource persons.

Interview Data. Experience site resource persons and contact persons spoke with enthusiasm of their experiences with EBCE students. They felt that the contacts had been advantageous not only to the students, but to their own employees as well, since employees often gained new insight into the importance of the role each job has in relation to the whole operation.

Table 14

Resource Persons' Report of Impacts of EBCE Participation and Their Firms

To what extent has the EBCE Program had an impact on?	How much Impact?			Value of Impact?		
	$\bar{X}$	SD	N	$\bar{X}$	SD	N
33-34 Qualify of work performed by regular employees	2.5	0.8	78	2.5	0.6	58
35-36 Amount of work performed by regular employees	2.5	0.8	79	2.5	0.6	55
37-38 Company hiring practices	2.0	0.6	77	2.1	0.4	52
39-40 Company training practices	2.5	0.7	74	2.6	0.5	53
41-42 Other possible impacts	1.4	0.5	5	2.0	0.0	3
	Key: 1 = Don't know 2 = No Impact 3 = Some Impact 4 = Much Impact			Key: 1 = Bad Impact 2 = Don't Know 3 = Good Impact		

The grouping number of experience sites in and around Fond du Lac and the willingness of original experience sites to continue to accept new students are evidence of the positive feelings resource persons toward the EBCE program. Many have subsequently offered EBCE students part-time and/or summer employment at the job sites as a result of student placements there.

Summary of Student Outcome Objectives

Based on the supporting evidence cited above, the third party evaluators conclude that all student outcome objectives are being met with the exception of 1.6, the follow-up graduates, for which data do not yet exist.

ACCOMPLISHMENT OF PROCESS OBJECTIVES

2.1. The EBCE management objectives systems will be utilized.

The project staff has made a modification of the MBO System developed by EBCE. The modifications appear to be logical. The objectives developed by the project staff are being utilized to manage their time, effort, and resources.

The third party evaluators found the project to be well managed, communications between staff members were excellent, and the level of motivation was very high. These characteristics are also reflected in the data reported for the outcome objectives. For example, in Table 12, Parent Opinion Survey, parents reported that the EBCE staff was effective and enthusiastic (Items 17 and 20). On-site interviews with project staff revealed that they had well defined objectives and ideas on how to attain these objectives.

It is the conclusion of the third party evaluators that this objective was met.

2.2 A representative sample of total student population at 11th and 12th grade will be identified.

The data reported in the prior section indicate that the EBCE and control groups came from the same population. There were no significant differences in the reading and math scores on the pre-test for the students in the two groups. Also as noted in the prior section, the mean scores for the two groups were at the means for the national norms.

The grade point averages for the EBCE, control and all 12th grade students are reported in Table 15. An analysis of the differences in the

44

gradepoint averages for the three groups indicated that the EBCE students were significantly lower than the control group and the 12th graders in general. It should be noted that these differences were in the ranges of .30 of a point. Therefore, the actual difference in level of performance may not be very noticeable.

Based on the data, it would appear that the EBCE students had performance levels which were slightly lower than the total population of twelfth grade students. They appeared to represent a cross-section of the twelfth grade. The standard deviation of the grade points in the EBCE group was the same as in the total twelfth grade. It should also be noted that only one eleventh grader was included in the EBCE group. Basically, the project was working with twelfth graders during 1976-77 school year.

Table 15

Grade Point Averages for
EBCE, Control Group, and Twelfth
Grade Students In Fond du Lac
Public Schools

Group	Grade Point Average		
	$\bar{X}$	SD	N
EBCE	2.19#*	.73	56
Control	2.50#	.69	39
12th Graders	2.44*	.73	663

# Control group has a significantly higher grade point average ($P < .05$) on a two-way analysis of variance.

* EBCE students had significantly lower grade point averages than the total twelfth grade ($t = 1.99$, $P < .05$)

One potential problem in selecting a representative sample of students for the EBCE program was noted during on-site interviews with students. EBCE and comparison group students both perceived restricted opportunities for social interaction with their peer group as the largest single drawback of participating EBCE. In addition, time demands the EBCE participation made it difficult to also maintain a part-time job. Many students depended on their part-time jobs for income.

It was the conclusion of the third party evaluators that this objective had been reached.

2.3 A mechanism to periodically update the Fond du Lac community about EBCE experiences that will be developed and implemented.

The on-site visitation and review of Project documents indicated that numerous methods were used to keep the Fond du Lac community informed of EBCE progress. These included newsletters, media coverage, a slide-tape series, speaking engagements to civic groups, and personal contacts.

The high degree of community acceptance and support for EBCE indicates that this objective is being effectively met.

2.4 AEL/EBCE concepts and objectives will be used.

The third party evaluators have reviewed in depth the AEL/EBCE student guides and materials being used. Project staff members have made minor changes to meet needs but have retained the concepts and objectives.

The third party evaluators concluded that this process objective has been completely met.

2.5 Activity sheets will be used to document and monitor student academic process.

Insepection of the activity sheets and examples of folders during the on-site visits indicates that this process objective is being met. Some modifications have been made by the staff to develop a more functional activity sheet. The documents and folders inspected revealed good documentation. The changes made indicate that the process is being carried out.

2.6 AEL/EBCE's inquiry model will be used.

A visit to the Project's classrooms and offices and an inspection of the learning materials revealed that the inquiry model was used consistently. Copies of it have been reproduced for use by staff and students. Students used the inquiry model in designing their learning experiences. In the evaluation survey, 79% of the EBCE students reported that they understood the inquiry process (Item 32 in Table 16).

The third party evaluators concluded that this objective was attained.

2.7 EBCE students will have an individualized and personalized program.

Student reactions to the level of input they had into writing their own activity sheets and justifying their own activities are given in

Table 16

EBCE Student Evaluation of Learning Materials

Statement	Responses					
	(1) Not Helpful		(2) Somewhat Helpful		(3) Very Helpful	
	N	%	N	%	N	%
27. Do you feel the check lists in the Student Program Guide were helpful to you in career decision making?	10	18	39	70	7	13
28. Do you feel the feedback exercises, Section II, in the Student Career Guide were helpful to you?	6	11	36	64	14	25
29. Do you feel that Section III in the SCG which deals with values was helpful to you?	6	11	32	57	18	32

	No (1)		Yes (2)	
30. Do you feel that the activity sheets are a good approach to learning?	4	7	52	93
31. Did you have a much in-put into writing your activity sheets as you wanted?	12	21	43	77
32. Do you feel you understand the Inquiry Process?	10	18	44	79
33. Are you satisfied with the way your Activity Sheets were evaluated?	6	11	47	84

Table 16. Slightly more than three-fourths of the students responding indicated that they had considerable input in developing their activities (Item 31).

Discussion with students during on-site visitations indicated that EBCE students have an individualized program to acquire skills related to their EBCE experiences or to complete course requirements for graduation. Most of the students had completed the required courses for graduation prior to enrolling in EBCE and therefore were primarily working on their EBCE experience. The EBCE experience was used as elective credit. Articulation of EBCE with Goodrich's schedule may be difficult for some students enrolled for a full year in the program.

The third party evaluators concluded that this objective had been met. During the second year of the project, staff should monitor the availability of individualized instructional assistance at Goodrich High School and work to make effective utilization of it.

2.8 Activity sheets will be written.

A review of a sample of student files indicated that students developed activity sheets for their experience-site placements and they became increasingly self-sufficient in designing their own learning activities.

Activity sheets were rated as a good approach to learning by 93 percent of the EBCE students (Table 16 - Item 30). Satisfaction with the evaluation of the activity sheets was registered by 84 percent of the EBCE students. Therefore, there was strong feeling on the part of the students that the activity sheets were effective and utilized appropriately.

The third party evaluators concluded that this objective was met.

2.9 A student career guide will be used by EBCE students.

The on-site visits revealed that the career guide was being utilized by students. Discussion with EBCE students indicated that they were following a planned sequence of career development experiences.

Student responses on the student evaluation forms indicated that the career guide and checklist were helpful in their decision-making (Table 16 - Item 27). Eighty-three percent of the EBCE students felt that the objectives were of some or much help to them. The feedback exercises in the guide were also listed to be helpful by 89 percent of the students responding (Item 28). The values section of the guide was also rated as being helpful by 89 percent of the respondents (Item 29).

The third party evaluators concluded that this objective was completed.

2.10 EBCE request for placement form will be used.

Student evaluation of the placement process is given in Table 17. Students thought that the placement procedures were functional (Item 15) and that there was enough effort extended in meeting their placement needs (Item 19).

Few negative comments were registered by students on the placement procedures and process. The most common negative response was that there were not enough EBCE job sites available. However, only 9 percent of the EBCE students checked this response (Item 14). Two students felt that the experience site guides were not completely accurate. Since these guides were in their first year of development, it might be expected that there would have been more errors than actually reported. The third party evaluators review of the guides indicated that they were

Table 17

Student Evaluation of Placement Coordinator and Placement Procedures

Statement	Responses (1) No N	(1) No %	(2) Sometimes N	(2) Sometimes %	(3) Yes N	(3) Yes %
14. Do you feel there is a wide enough selection of EBCE job sites available?	5	9	13	23	38	68
15. Do you feel the placement procedure went smoothly?	0	0	11	20	45	80
16. Do you feel students should be able to reserve a job site?	1	2	13	23	42	75
17. Do you feel there was enough information available about the job sites in advance?	0	0	18	32	38	68
18. Do you feel the Experience Site Learning Guides are accurate?	2	4	24	43	30	54
19. Do you feel every effort was extended to meet your placement needs?	1	2	12	21	43	77

of high quality.

On-site interviews with resource persons and students indicated that the placement procedures were carried out effectively.

The third party evaluators concluded that this objective was met.

2.11 Activity sheets will be inter-disciplinary

A review of a sample of the activity sheets indicated that a variety of learning activities were defined. The third party evaluators concluded that this process objective was met.

2.12 Worker trait groups will be assigned to experience/site resource persons

The third party evaluators received a sample of the site analyses. These are high quality and give the worker trait group designation. The third party evaluators concluded that this process objective has been attained.

2.13 Learning coordinators will make regular site visits

With one exception the EBCE students gave very favorable ratings to their learning coordinators and the assistance received from them. (See Table 18.) The exception was that the student felt that the learning coordinators should visit them more often on the job (Item 7) and should have more time available to meet with them (Item 12). These two items have the largest number of no or negative responses. Assessment of the learning coordinator's competence (Item 6), interest in the students (Item 9), empathy with the EBCE students' problems (Item 10) and assistance provided for academic needs (Items 11 and 13) were rated very highly by the EBCE students. The largest number of "sometimes" responses were

Table 18

Student Evaluation of Learning Coordinators

Statement	Responses					
	(1) No		(3) Sometimes		(3) Yes	
	N	%	N	%	N	%
6. Do you feel your L.C. was competent in his/her dealings with you?	1	2	8	14	46	82
7. Did your L.C. visit you enough on your job sites?	7	13	13	23	36	64
8. Do you feel your L.C. effectively managed your career experiences?	1	2	26	46	29	52
9. Do you feel your L.C. cares for you as a person?	2	4	10	18	44	79
10. Do you feel comfortable discussing personal problems with your L.C.?	3	5	25	45	28	50
11. Do you feel your L.C. has helped you with your academic needs?	2	4	12	21	42	75
12. Do you understand and are you satisfied with your L.C.'s appointment schedule?	6	11	11	20	39	70
13. Do you feel your L.C. has helped you grow in critical thinking skills (Inquiry)?	1	2	19	34	36	64

received on the learning coordinator's effective management of student's career experiences (Item 8) and the degree to which the student felt comfortable discussion personal problems with their learning coordinator (Item 10). However, few students felt that the learning coordinators were not effective in these areas. Considering the types of situations handled within these two domains, one might expect this pattern of responses.

Interviews with the placement counselor, staff, and resource persons indicated that regular site visits were made. With a load of 20 students each, the staff did not have a large amount of time to utilize for each site visit. By making effective use of their time and working extra hours, the EBCE staff was able to make site visits and develop new sites. EBCE staff members are commended for their outstanding work in this area.

The third party evaluators concluded that this process objective was met. It is recommended that the assignment of 20 students per staff member be closely studied. The job of the staff person needs to be reviewed to determine how much developmental time is required and how much time is available for students. It may be necessary to reduce the number of students per staff person during the first one and one-half to two years of the project.

2.14 Community advisory council will meet once a month

The third party evaluators did not have an opportunity to view a meeting of the Community Advisory Council. Two meetings with the Chairperson indicated that the committee functioned adequately and gave input to the project director.

This objective was attained.

APPENDIX A

AEL Instruments

APPENDIX B

The Analysis of Variance and Co-Variance Tables for the Statistical Analyses For This Evaluation

Analysis of Variance Tables

Introduction

In these analyses the following row and column designations were used.

Row 1 = EBCE

Row 2 = Control

Column 1 = Boys (All)

Column 2 = Girls (All)

Row 1, Column 1 = EBCE Boys

Row 1, Column 2 = EBCE Girls

Row 2, Column 1 = Control Boys

Row 2, Column 2 = Control Girls

Reading Pre-Test

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  MEAN AND STANDARD DEVIATIONS


ROW  1 COLUMN  1  MEAN=   32.27 STD=   6.47  N=  33
ROW  1 COLUMN  2  MEAN=   31.70 STD=   9.97  N=  23
ROW  1              MEAN=   32.04 STD=   8.01 N=  56
ROW  2 COLUMN  1  MEAN=   32.00 STD=   7.18  N=  25
ROW  2 COLUMN  2  MEAN=   31.79 STD=   7.88  N=  14
ROW  2              MEAN=   31.92 STD=   7.33 N=  39
COLUMN  1         MEAN=   32.16  STD=   6.72  N=  58
COLUMN  2         MEAN=   31.73  STD=   9.12  N=  37



                    TWO FACTOR ANALYSIS OF VARIANCE


                 DEGREES OF                SUM OF SQUARES    MEAN SQUARES
                  FREEDOM
BETWEEN ROWS.         1                        0.1971              0.1971
BETWEEN COLS.         1                        3.7167              3.7167
INTERACTION           1                        0.7886              0.7886
ERROR TERM           91                     5569.7700             61.2063
-------------------------------------------------------------------------
TOTAL                94                     5574.4800


SIGNIFICANT OF ROW VARIABLE
     F=   0.00    DF=  1 ,  91
     THE EXACT PROBABILITY IS .95365
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL
SIGNIFICANCE OF COLUMN VARIABLE
     F=   0.06    DF=  1 ,  91
     THE EXACT PROBABILITY IS .8013
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL
SIGNIFICANCE OF INTERACTION
     F=   0.01    DF=  1 ,  91
     THE EXACT PROBABILITY IS .90595
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL


Ready
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Reading Post-Test

```
 MEAN AND STANDARD DEVIATIONS

ROW  1 COLUMN  1  MEAN=    32.48 STD=    6.86  N=  33
ROW  1 COLUMN  2  MEAN=    32.52 STD=    8.36  N=  23
ROW  1              MEAN=    32.50 STD=    7.43 N=  56
ROW  2 COLUMN  1  MEAN=    33.64 STD=   7.76   N=  25
ROW  2 COLUMN  2  MEAN=    33.00 STD=   9.92   N=  14
ROW  2              MEAN=    33.41 STD=    8.47 N=  39
COLUMN  1         MEAN=    32.98  STD=    7.21   N=  58
COLUMN  2         MEAN=    32.70  STD=    8.84   N=  37



                              TWO FACTOR ANALYSIS OF VARIANCE

                    DEGREES OF                 SUM OF SQUARES    MEAN SQUARES
                     FREEDOM
BETWEEN ROWS.           1                        15.8527             15.8527
BETWEEN COLS.           1                         2.1686              2.1686
INTERACTION             1                         2.7020              2.7020
ERROR TERM             91                      5761.7400             63.3158
----------------------------------------------------------------------------
TOTAL                  94                      5782.4600


SIGNIFICANT OF ROW VARIABLE
     F=   0.25    DF=  1 ,  91
     THE EXACT PROBABILITY IS .62397
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL
SIGNIFICANCE OF COLUMN VARIABLE
     F=   0.03    DF=  1 ,  91
     THE EXACT PROBABILITY IS .84781
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL
SIGNIFICANCE OF INTERACTION
     F=   0.04    DF=  1 ,  91
     THE EXACT PROBABILITY IS .83118
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL


Ready
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Math Pre-Test

```
 MEAN AND STANDARD DEVIATIONS

ROW  1 COLUMN  1  MEAN=   37.58 STD=   7.22  N=  33
ROW  1 COLUMN  2  MEAN=   36.61 STD=  10.14  N=  23
ROW  1             MEAN=   37.18 STD=   8.46 N=  56
ROW  2 COLUMN  1  MEAN=   37.08 STD=  10.51  N=  25
ROW  2 COLUMN  2  MEAN=   32.29 STD=  12.30  N=  14
ROW  2             MEAN=   35.36 STD=  11.27 N=  39
COLUMN  1         MEAN=   37.36  STD=   8.71  N=  58
COLUMN  2         MEAN=   34.97  STD=  11.04  N=  37



                       TWO FACTOR ANALYSIS OF VARIANCE

                 DEGREES OF                SUM OF SQUARES    MEAN SQUARES
                  FREEDOM
BETWEEN ROWS.        1                        137.8730           137.8730
BETWEEN COLS.        1                        197.0860           197.0860
INTERACTION          1                         86.9519            86.9519
ERROR TERM          91                       8546.2400            93.9147
--------------------------------------------------------------------------------
TOTAL               94                       8968.1500


SIGNIFICANT OF ROW VARIABLE
     F=   1.47    DF=  1 ,  91
     THE EXACT PROBABILITY IS .22666
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL
SIGNIFICANCE OF COLUMN VARIABLE
     F=   2.10    DF=  1 ,  91
     THE EXACT PROBABILITY IS .1471
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL
SIGNIFICANCE OF INTERACTION
     F=   0.93    DF=  1 ,  91
     THE EXACT PROBABILITY IS .6598
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL


Ready
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Math Post-Test

```
 MEAN AND STANDARD DEVIATIONS


ROW   1 COLUMN   1  MEAN=    35.58 STD=    7.71   N=   33
ROW   1 COLUMN   2  MEAN=    36.83 STD=   11.17   N=   23
ROW   1               MEAN=    36.09 STD=    9.21 N=   56
ROW   2 COLUMN   1  MEAN=    39.80 STD=    9.28   N=   25
ROW   2 COLUMN   2  MEAN=    34.71 STD=   10.25   N=   14
ROW   2               MEAN=    37.97 STD=    9.82 N=   39
COLUMN   1          MEAN=    37.40   STD=    8.61    N=   58
COLUMN   2          MEAN=    36.03   STD=   10.73    N=   37



                        TWO FACTOR ANALYSIS OF VARIANCE


                   DEGREES OF               SUM OF SQUARES    MEAN SQUARES
                    FREEDOM
BETWEEN ROWS.          1                       26.4984          26.4984
BETWEEN COLS.          1                       87.3346          87.3346
INTERACTION            1                      238.3470         238.3470
ERROR TERM            91                     8076.2200          88.7497
-----------------------------------------------------------------------------
TOTAL                 94                     8428.4100


SIGNIFICANT OF ROW VARIABLE
     F=   0.30     DF=  1 ,  91
     THE EXACT PROBABILITY IS .59284
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL
SIGNIFICANCE OF COLUMN VARIABLE
     F=   0.98     DF=  1 ,  91
     THE EXACT PROBABILITY IS .6753
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL
SIGNIFICANCE OF INTERACTION
     F=   2.69     DF=  1 ,  91
     THE EXACT PROBABILITY IS .10075
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL


Ready
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CMI - Attitude Scale: Pre-Test

```
 MEAN AND STANDARD DEVIATIONS


ROW  1 COLUMN  1  MEAN=   35.12 STD=   5.16  N=  33
ROW  1 COLUMN  2  MEAN=   37.43 STD=   3.40  N=  23
ROW  1              MEAN=   36.07 STD=   4.63 N=  56
ROW  2 COLUMN  1  MEAN=   32.84 STD=   6.16  N=  25
ROW  2 COLUMN  2  MEAN=   37.29 STD=   4.41  N=  14
ROW  2              MEAN=   34.44 STD=   5.94 N=  39
COLUMN  1         MEAN=   34.14  STD=   5.67  N=  58
COLUMN  2         MEAN=   37.38  STD=   3.75  N=  37



                    TWO FACTOR ANALYSIS OF VARIANCE


                DEGREES OF            SUM OF SQUARES    MEAN SQUARES
                 FREEDOM
BETWEEN ROWS.       1                    35.0684           35.0684
BETWEEN COLS.       1                   271.2700          271.2700
INTERACTION         1                    26.9855           26.9855
ERROR TERM         91                  2267.3800           24.9163
---------------------------------------------------------------------
TOTAL       .      94                  2600.7100


SIGNIFICANT OF ROW VARIABLE
     F=   1.41    DF=  1 ,  91
     THE EXACT PROBABILITY IS .23674
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL
SIGNIFICANCE OF COLUMN VARIABLE
     F=  10.89    DF=  1 ,  91
     THE EXACT PROBABILITY IS .00176
     THIS IS SIGNIFICANT AT THE .01 LEVEL
SIGNIFICANCE OF INTERACTION
     F=   1.08    DF=  1 ,  91
     THE EXACT PROBABILITY IS .30121
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL



Ready
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CMI - Attitude Scale: Post-Test

```
MEAN AND STANDARD DEVIATIONS

ROW  1 COLUMN  1  MEAN=   36.00 STD=   4.53  N=  33
ROW  1 COLUMN  2  MEAN=   35.83 STD=   8.94  N=  23
ROW  1              MEAN=   35.93 STD=   6.63 N=  56
ROW  2 COLUMN  1  MEAN=   34.44 STD=   5.87  N=  25
ROW  2 COLUMN  2  MEAN=   40.50 STD=   3.11  N=  14
ROW  2              MEAN=   36.62 STD=   5.81 N=  39
COLUMN  1         MEAN=   35.33  STD=   5.16  N=  58
COLUMN  2         MEAN=   37.59  STD=   7.59  N=  37


                              TWO FACTOR ANALYSIS OF VARIANCE

                        DEGREES OF               SUM OF SQUARES    MEAN SQUARES
                         FREEDOM
BETWEEN ROWS.               1                        57.5659             57.5659
BETWEEN COLS.               1                       205.7020            205.7020
INTERACTION                 1                       230.7390            230.7390
ERROR TERM                 91                      3366.9600             36.9996
------------------------------------------------------------------------------
TOTAL                      94                      3860.9700


SIGNIFICANT OF ROW VARIABLE
     F=   1.56     DF=  1 ,  91
     THE EXACT PROBABILITY IS .21297
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL
SIGNIFICANCE OF COLUMN VARIABLE
     F=   5.56     DF=  1 ,  91
     THE EXACT PROBABILITY IS .01937
     THIS IS SIGNIFICANT AT THE .05 LEVEL
SIGNIFICANCE OF INTERACTION
     F=   6.24     DF=  1 ,  91
     THE EXACT PROBABILITY IS .01368
     THIS IS SIGNIFICANT AT THE .05 LEVEL


Ready
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Student Attitude Survey: Pre-Test

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  MEAN AND STANDARD DEVIATIONS


ROW   1 COLUMN   1  MEAN=  285.18 STD=  31.16   N=  33
ROW   1 COLUMN   2  MEAN=  292.74 STD=  28.77   N=  23
ROW   1              MEAN=  288.29 STD=  30.17 N=  56
ROW   2 COLUMN   1  MEAN=  282.40 STD=  30.04   N=  25
ROW   2 COLUMN   2  MEAN=  301.79 STD=  16.83   N=  14
ROW   2              MEAN=  289.36 STD=  27.49 N=  39
COLUMN   1          MEAN=  283.98  STD=  30.45   N=  58
COLUMN   2          MEAN=  296.16  STD=  25.05   N=  37     Girls




                              TWO FACTOR ANALYSIS OF VARIANCE

                  DEGREES OF                SUM OF SQUARES    MEAN SQUARES
                   FREEDOM
BETWEEN ROWS.         1                       233.0470           233.0470
BETWEEN COLS.         1                      4309.8800          4309.8800
INTERACTION           1                       830.5080           830.5080
ERROR TERM           91                     74619.7000           819.9970
-------------------------------------------------------------------------
TOTAL      .         94                     79993.2000


SIGNIFICANT OF ROW VARIABLE
     F=   0.28     DF=  1 ,  91
     THE EXACT PROBABILITY IS .60181
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL
SIGNIFICANCE OF COLUMN VARIABLE
     F=   5.26     DF=  1 ,  91
     THE EXACT PROBABILITY IS .02275       Sex
     THIS IS SIGNIFICANT AT THE .05 LEVEL
SIGNIFICANCE OF INTERACTION
     F=   1.01     DF=  1 ,  91
     THE EXACT PROBABILITY IS .31801
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL


Ready
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Student Attitude Survey: Post-Test

```
 MEAN AND STANDARD DEVIATIONS


ROW   1 COLUMN   1  MEAN=   282.46 STD=   72.88  N=   33
ROW   1 COLUMN   2  MEAN=   280.39 STD=   23.07  N=   23
ROW   1              MEAN=   281.61 STD=   57.48 N=   56
ROW   2 COLUMN   1  MEAN=   264.48 STD=   18.02  N=   25
ROW   2 COLUMN   2  MEAN=   277.43 STD=   13.29  N=   14
ROW   2              MEAN=   269.13 STD=   17.47 N=   39
COLUMN   1          MEAN=   274.71  STD=   56.56  N=   58
COLUMN   2          MEAN=   279.27  STD=   19.78  N=   37




                     TWO FACTOR ANALYSIS OF VARIANCE


                DEGREES OF                SUM OF SQUARES    MEAN SQUARES
                 FREEDOM
BETWEEN ROWS.       1                      2602.8500            2602.8500
BETWEEN COLS.       1                       703.5940             703.5940
INTERACTION         1                      1337.4200            1337.4200
ERROR TERM         91                    191745.0000            2107.0900
-----------------------------------------------------------------------
TOTAL              94                    196389.0000



SIGNIFICANT OF ROW VARIABLE
     F=   1.24     DF=  1 ,  91
     THE EXACT PROBABILITY IS .26853
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL
SIGNIFICANCE OF COLUMN VARIABLE
     F=   0.33     DF=  1 ,  91
     THE EXACT PROBABILITY IS .57179
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL
SIGNIFICANCE OF INTERACTION
     F=   0.63     DF=  1 ,  91
     THE EXACT PROBABILITY IS .56653
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL



Ready
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Socialization Profile - Perceptions of Females: Pre-Test

```
 MEAN AND STANDARD DEVIATIONS


ROW  1 COLUMN  1  MEAN=  125.12 STD=  17.41  N=  33
ROW  1 COLUMN  2  MEAN=  131.87 STD=  12.09  N=  23
ROW  1             MEAN=  127.89 STD=  15.69 N=  56
ROW  2 COLUMN  1  MEAN=  122.40 STD=  25.15  N=  25
ROW  2 COLUMN  2  MEAN=  131.21 STD=  10.18  N=  14
ROW  2             MEAN=  125.56 STD=  21.29 N=  39
COLUMN  1         MEAN=  123.95  STD=  20.94  N=  58
COLUMN  2         MEAN=  131.62  STD=  11.26  N=  37



                              TWO FACTOR ANALYSIS OF VARIANCE


                  DEGREES OF                 SUM OF SQUARES    MEAN SQUARES
                   FREEDOM
BETWEEN ROWS.         1                          67.7246             67.7246
BETWEEN COLS.         1                        1438.0800           1438.0800
INTERACTION           1                          25.2344             25.2344
ERROR TERM           91                       29440.5000            323.5210
--------------------------------------------------------------------------------
TOTAL                94                       30971.5000


SIGNIFICANT OF ROW VARIABLE
     F=   0.21    DF=  1 ,  91
     THE EXACT PROBABILITY IS .65317
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL
SIGNIFICANCE OF COLUMN VARIABLE
     F=   4.45    DF=  1 ,  91
     THE EXACT PROBABILITY IS .03546
     THIS IS SIGNIFICANT AT THE .05 LEVEL
SIGNIFICANCE OF INTERACTION
     F=   0.08    DF=  1 ,  91
     THE EXACT PROBABILITY IS .77737
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL



Ready
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Socialization Profile - Perceptions of Females: Post-Test

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  MEAN AND STANDARD DEVIATIONS

ROW   1 COLUMN  1  MEAN=  129.46 STD=  16.65  N=  33
ROW   1 COLUMN  2  MEAN=  133.26 STD=  13.83  N=  23
ROW   1              MEAN=  131.02 STD=  15.53 N=  56
ROW   2 COLUMN  1  MEAN=  123.44 STD=  13.73  N=  25
ROW   2 COLUMN  2  MEAN=  128.57 STD=  11.02  N=  14
ROW   2              MEAN=  125.28 STD=  12.92 N=  39
COLUMN  1          MEAN=  126.86  STD=  15.62  N=  58
COLUMN  2          MEAN=  131.49  STD=  12.89  N=  37



                              TWO FACTOR ANALYSIS OF VARIANCE

                 DEGREES OF                SUM OF SQUARES    MEAN SQUARES
                  FREEDOM
BETWEEN ROWS.        1                        680.2150          680.2150
BETWEEN COLS.        1                        474.2580          474.2580
INTERACTION          1                         10.3906           10.3906
ERROR TERM          91                      19182.2000          210.7930
-------------------------------------------------------------------------
TOTAL               94                      20347.1000


SIGNIFICANT OF ROW VARIABLE
     F=   3.23    DF=  1 ,  91
     THE EXACT PROBABILITY IS .07213
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL
SIGNIFICANCE OF COLUMN VARIABLE
     F=   2.25    DF=  1 ,  91
     THE EXACT PROBABILITY IS .13318
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL
SIGNIFICANCE OF INTERACTION
     F=   0.05    DF=  1 ,  91
     THE EXACT PROBABILITY IS .81947
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL


Ready
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Socialization Profile - Perceptions of Males: Pre-Test

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 MEAN AND STANDARD DEVIATIONS


ROW  1 COLUMN  1  MEAN=  165.33 STD=  13.79  N=  33
ROW  1 COLUMN  2  MEAN=  159.96 STD=  10.29  N=  23
ROW  1              MEAN=  163.13 STD=  12.66 N=  56
ROW  2 COLUMN  1  MEAN=  165.52 STD=  13.28  N=  25
ROW  2 COLUMN  2  MEAN=  157.57 STD=   9.02  N=  14
ROW  2              MEAN=  162.67 STD=  12.42 N=  39
COLUMN  1         MEAN=  165.41  STD=  13.46  N=  58
COLUMN  2         MEAN=  159.05  STD=   9.77  N=  37




                              TWO FACTOR ANALYSIS OF VARIANCE


                  DEGREES OF              SUM OF SQUARES    MEAN SQUARES
                   FREEDOM
BETWEEN ROWS.         1                      28.7598           28.7598
BETWEEN COLS.         1                    1054.4600         1054.4600
INTERACTION           1                      39.1504           39.1504
ERROR TERM           91                   13707.9000          150.6370
-----------------------------------------------------------------------
TOTAL                94                   14830.3000


SIGNIFICANT OF ROW VARIABLE
     F=   0.19    DF=  1 ,  91
     THE EXACT PROBABILITY IS .66727
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL
SIGNIFICANCE OF COLUMN VARIABLE
     F=   7.00    DF=  1 ,  91
     THE EXACT PROBABILITY IS .00939
     THIS IS SIGNIFICANT AT THE .01 LEVEL
SIGNIFICANCE OF INTERACTION
     F=   0.26    DF=  1 ,  91
     THE EXACT PROBABILITY IS .61757
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL


Ready
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Socialization Profile - Perceptions of Males: Post-Test

```
  MEAN AND STANDARD DEVIATIONS


ROW  1 COLUMN  1  MEAN=  159.88 STD=  15.44  N=  33
ROW  1 COLUMN  2  MEAN=  158.35 STD=  12.09  N=  23
ROW  1              MEAN=  159.25 STD=  14.06 N=  56
ROW  2 COLUMN  1  MEAN=  167.12 STD=  14.42  N=  25
ROW  2 COLUMN  2  MEAN=  161.71 STD=  11.36  N=  14
ROW  2              MEAN=  165.18 STD=  13.50 N=  39
COLUMN  1         MEAN=  163.00  STD=  15.31  N=  58
COLUMN  2         MEAN=  159.62  STD=  11.78  N=  37




                    TWO FACTOR ANALYSIS OF VARIANCE


                DEGREES OF             SUM OF SQUARES    MEAN SQUARES
                 FREEDOM
BETWEEN ROWS.       1                       668.3400          668.3400
BETWEEN COLS.       1                       285.5570          285.5570
INTERACTION         1                        88.8770           88.8770
ERROR TERM         91                     17512.2000          192.4410
-----------------------------------------------------------------------
TOTAL              94                     18554.9000


SIGNIFICANT OF ROW VARIABLE
     F=   3.47     DF=  1 ,  91
     THE EXACT PROBABILITY IS .06222
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL
SIGNIFICANCE OF COLUMN VARIABLE
     F=   1.48     DF=  1 ,  91
     THE EXACT PROBABILITY IS .22412
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL
SIGNIFICANCE OF INTERACTION
     F=   0.46     DF=  1 ,  91
     THE EXACT PROBABILITY IS .50557
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL


Ready
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Socialization Profile - Perceptions of Ma;es: Post-Test Analysis of Covariance

```
                    TWO FACTOR ANALYSIS OF COVARIANCE

                DEGREES OF            SUM OF SQUARES     MEAN SQUARES
                 FREEDOM
BETWEEN ROWS.       1                    817.5480          817.5480
BETWEEN COLS.       1                     59.3789           59.3789
INTERACTION         1                     18.7148           18.7148
ERROR TERM         90                   9218.7700          102.4310
-----------------------------------------------------------------------
TOTAL              93                  10114.4000


SIGNIFICANCE OF ROW VARIABLE
     F=   7.98    DF=  1 ,  90
     THE EXACT PROBABILITY IS .00594
     THIS IS SIGNIFICANT AT THE .01 LEVEL  *>
SIGNIFICANCE OF COLUMN VARIABLE
     F=   0.58    DF=  0 ,  90
     THE EXACT PROBABILITY IS .54517
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL
SIGNIFICANCE OF INTERACTION
     F=   0.18    DF=  1 ,  90
     THE EXACT PROBABILITY IS .6738
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL
```

Row = Treatment
Column = Sex
*Control group assigned higher scores.

Grade Point Average

```
  MEAN AND STANDARD DEVIATIONS


ROW   1 COLUMN   1  MEAN=     2.12 STD=    0.63  N=   33
ROW   1 COLUMN   2  MEAN=     2.30 STD=    0.86  N=   23
ROW   1               MEAN=     2.19 STD=    0.73 N=   56
ROW   2 COLUMN   1  MEAN=     2.42 STD=    0.64  N=   25
ROW   2 COLUMN   2  MEAN=     2.66 STD=    0.76  N=   14
ROW   2               MEAN=     2.50 STD=    0.69 N=   39
COLUMN   1          MEAN=     2.25  STD=    0.65   N=   58
COLUMN   2          MEAN=     2.44  STD=    0.84   N=   37




                        TWO FACTOR ANALYSIS OF VARIANCE

                  DEGREES OF               SUM OF SQUARES    MEAN SQUARES
                   FREEDOM
BETWEEN ROWS.         1                      2.5462              2.5462
BETWEEN COLS.         1                      1.0969              1.0969
INTERACTION           1                      0.0221              0.0221
ERROR TERM           91                     46.4882              0.5109
------------------------------------------------------------------------
TOTAL                94                     50.1534


SIGNIFICANT OF ROW VARIABLE
     F=    4.98    DF=  1 ,  91
     THE EXACT PROBABILITY IS .02634
     THIS IS SIGNIFICANT AT THE .05 LEVEL
SIGNIFICANCE OF COLUMN VARIABLE
     F=    2.15    DF=  1 ,  91
     THE EXACT PROBABILITY IS .14245
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL
SIGNIFICANCE OF INTERACTION
     F=    0.04    DF=  1 ,  91
     THE EXACT PROBABILITY IS .83008
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL


Ready
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Experience Based Career Education Project
Fond du Lac Public School System - Year II

Project Number 502-AH-60042
(Grant Number G05-76-00213)

by

Gloria Bjornerud
Orville Nelson (Co-Director)
Harold Halfin (Co-Director)

Center for Vocational, Technical
and Adult Education
UW-Stout
Menomonie, Wisconsin

December, 1978

EXPERIENCE BASED CAREER EDUCATION PROJECT
FOND DU LAC PUBLIC SCHOOL SYSTEM

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Summary

The purpose of the Third Party Evaluation for the second year of the Fond du Lac, Wisconsin Experience Based Career Education (EBCE) Project was to certify whether the project's objectives for 1977-78 were met and to assess the degree to which they were met.

Third party evaluation activities included assessment of the project's student-outcome objectives as well as its process objectives and their impact on the total project. An evaluation matrix was used to relate specific objectives with an evaluation criterion, statistical comparison, the activity involved, and tentative date of measurement.

Data were collected through the use of commercially published standardized tests of reading and math skills, attitudes toward work and school, career decision making, and sex role stereotyping, as well as through interviews and instruments designed by the Appalachian Educational Laboratory (AEL) or EBCE staff. Third party evaluators interviewed Control Group and EBCE students, parents, teachers, resource persons, and project staff.

For the second consecutive year it was found that participation in EBCE had no significant negative impact on students' acquisition of reading and math skills. EBCE students made impressive gains in attitude toward school and work, personal and career maturity, occupational knowledge, and ability to work compatibly with others. It also had a significant impact on reducing sex role stereotyping.

The third party evaluators concluded that all student outcome and process objectives of the 1977-78 Fond du Lac EBCE Project have been met. The project in its second year also continues to have capable project management

and dynamic administration. Staff communication and cooperation remain excellent; project personnel have assumed leadership in the revision and/or redesign of EBCE materials. The project has matured into the dissemination phase with its personnel actively engaged in outreach to schools and service agencies interested in implementing EBCE in their communities. Project staff are preparing themselves to provide training and technical assistance to systems wishing to utilize the EBCE concept.

EVALUATION ACTIVITIES

At the close of the contract year, June 30, 1978, the third party evaluators had conducted three on-site visits to the Fond du Lac EBCE project, had processed and analyzed pre- and post-test data, reviewed a sample of documents produced by the project, assessed project dissemination activities, and reviewed learning materials.

Subjective data were obtained by on-site obervation and interviews with EBCE project staff, Goodrich High School officials, experience-site resource persons, community leaders, the citizens' committee, parents, and EBCE and control-group students during visits in November 1977, March and May, 1978. Analysis of pre- and post-test data from commercially published tests and AEL EBCE instruments provided information on the impacts on math and reading skills, attitudes toward work and school, career decision making, and sex role stereotyping. A copy of the AEL instruments is included in Appendix A.

Pre-test data were collected at the beginning of the first semester in which a student was involved with the project, either as an EBCE student or a member of the comparison group. Post-test data were collected within two weeks of the time the student exited the project. All pre- and post-tests were administered and supervised by EBCE and/or Goodrich High School staff. Test results were computer scored and analyzed at the Center for Research and Educational Improvement, University of Wisconsin-Stout, Menomonie. Test results and data analysis techniques used in the project evaluation are discussed in the next section.

Accomplishment of EBCE Student Outcome Objectives, 1977-78

1.1 EBCE students will do as well in academic skills as comparison group students.

As in the previous year of the project (1976-77), two measures of basic skills were used in the 1977-78 evaluation: the California Test of Basic Skills (CTBS) reading comprehension and mathematics concepts and applications tests. Pre-tests were administered to the EBCE and control groups at the beginning of their first semester of participation. Post-tests were administrered during the last two weeks of the 1977-78 school year. An analysis of the results is presented in the following paragraphs.

Reading. The CTBS reading comprehension test involves students in reading paragraphs, articles, and letters. Based on the information in the written materials, students then respond to questions which measure their ability to isolate main ideas, skill in developing conclusions, and ability to recall information.

The results for the pre- and post-tests for the first two years of the EBCE project, 1976-77 and 1977-78, are given in Table 1. A review of the mean scores in Table 1 indicates that there was little difference in the pre-test mean score of control group boys, and EBCE boys and girls. The means ranged from 28.5 to 30.5 on the pre-test. The pre-test mean score of control group girls was somewhat higher than that of all others, however. Statistical analysis of the pre-test scores with a two-way analysis of variance revealed no significant differences between groups.

The mean for twelfth graders on national norms for the CTBS reading test is also given in Table 1. The average scores of EBCE girls and boys as well

Table I

Pre- and Post-Test Results for CTBS Reading Test

Group	Pre-Test						Post-Test					
	$\overline{X}$		SD		N		$\overline{X}$		SD		N	
	1976-7	1977-8	1976-7	1977-8	'76-'77	'77-78	1976-7	1977-8	1976-7	1977-8	'76-'77	'77-'78
EBCE - Girls	31.7	28.5	10.0	7.5	23	32	32.5	27.7	8.4	8.1	23	28
Control - Girls	31.8	35.4	7.9	7.1	14	18	33.0	36.3	9.9	6.4	14	8
EBCE - Boys	32.3	29.4	6.5	8.3	33	24	32.5	29.4	6.9	7.9	33	29
Control - Boys	32.0	30.5	7.2	8.5	25	28	33.6	31.8	7.8	7.7	25	13

National Norms for grade 12: Mean ($\overline{X}$) = 32.0

Table 2

Net Change of Mean Reading Scores Between Pre- and Post-tests of CTBS

	1976-7	1977-8
EBCE - Girls	0.8	-0.8
Control - Girls	1.2	0.9
EBCE - Boys	0.2	0.0
Control - Boys	1.6	1.3

as of comparison group boys are all somewhat below the national average on both pre- and post-tests in 1977-78. Comparison girls, on the other hand, were considerably above the national average on both tests.

The post-test means of control girls and boys show a slight growth in reading scores from the pre- to post-test. Among the EBCE group, however, the mean score of the boys remained stable with no change, while EBCE girls showed a slight decrease in post-test score. Table 2 shows the net change in mean reading scores between pre- and post-tests of the CTBS during each year of the EBCE project in Fond du Lac. Control group girls and boys consistently show slight gains, while EBCE boys show no gain, and EBCE girls show a slight decline in mean reading score during the 1977-78 school year.

Mathematics. The CTBS mathematics applications and concepts test measures the student's ability to apply appropriate mathematics concepts or techniques to problems given in the test. Students work problems presented in the test and select the correct answer from a list of answers given. The items are in a multiple choice format.

The results of the mathematics pre- and post-tests are given in Table 3. Although the means are somewhat different, an analysis of variance revealed no statistically significant differences amoung the pre-test means. The F values for the analysis did not approach significance at the .05 level.

An analysis of variance run on the post-test means also indicated no significant differences. Thus it was the conclusion of the third party evaluators that participation in the EBCE program did not have a detrimental effect on the acquisition of math skills.

Although there were no statistically significant differences between groups on the post-test, however, the trend patterns suggested that the girls in the EBCE group may have experienced a less effective environment for acquiring these

Table 3

Pre- and Post-Test Results for CTBS Math

	Pre-Test						Post-Test					
Group	$\bar{X}$		SD		N		$\bar{X}$		SD		N	
	1976-7	1977-8	1976-7	1977-8	'76-7	'77-8	1976-7	1977-8	1976-7	1977-8	'76-7	'77-8
EBCE - Girls	36.6	30.7	10.1	10.2	23	31	36.8	29.2	11.2	8.9	23	28
Control - Girls	32.3	38.1	12.3	8.9	14	22	34.7	39.3	10.3	8.3	14	13
EBCE - Boys	37.6	34.2	7.2	8.6	33	24	35.6	34.5	7.7	7.1	33	28
Control - Boys	37.1	38.6	10.5	7.4	25	33	39.8	39.3	9.3	7.2	25	12

National Norms for grade 12: Mean ($\bar{X}$) = 34.0

Table 4

Net Change of Mean Math Scores Between Pre- and Post-Tests of CTBS

	1976-7	1977-8
EBCE - Girls	0.2	-1.5
Control - Girls	2.4	1.2
EBCE - Boys	-2.0	0.3
Control - Boys	2.7	0.7

skills during the 1977-78 school year. Net change of mean math scores between pre- and post-tests of the CTBS are shown in Table 4. Whereas the girls in the control group and to a lesser extent, the boys from both groups, increased their math scores from pre- to post-test, the EBCE girls showed a decline in performance. The EBCE girls had also been below the national average at the pre-test level. While their further decline of math skills or concepts might be attributable to chance measurement factors, characteristics of the EBCE program could also be responsible. Because of the data trends observed, it is recommended that the EBCE project staff monitor the extent and type of mathematics experiences provided in the EBCE program. If the same patterns emerge during the next year of the project, further analysis of the program should be made and appropriate action taken.

1.2 EBCE students will acquire greater career knowledge than will the comparison group of students.

Interview Data.

EBCE students had more knowledge about careers and jobs in which they had participated, but interviews with them did not suggest superior knowledge of careers beyond those in the Fond du Lac area in which they had participated. Some students had not gained knowledge about the various levels within occupational clusters. Control group students, however, appear to have even less real knowledge about career opportunities and requirements. In a relative sense, therefore, EBCE students were judged to have greater career knowledge than their control group counterparts.

EBCE students were also judged superior in their knowledge of how to find, get, and hold a job because of their numerous on-site experiences, inhouse workshops and learning activities. Control group students saw themselves as "disadvantaged" in this respect because they had no experience in interviewing and little or no previous work experience to list on job applications, resumes, etc.

While an abundance of career materials and information are available from counselors at Goodrich High School, control group students reported that they did not use it because they did not perceive the materials to be relevant or potentially helpful to them. EBCE students were more systematically exposed to career information through written materials, but they reported that it was through the learning activities and on-site experiences that they learned the most about careers.

The on-site observations and interviews conducted by the third party evaluators concurred with the reports of the resource persons in the types of assistance and service being given to students. The data reported from the employers' survey indicated that the resource persons had a genuine concern for the EBCE students and did spend time with them in various activities. Moreover, the EBCE students were allowed to gain hands-on experience with various tasks and jobs at the site.

Employer Survey. Resource persons were surveyed to determine the on the job and supportive services types of experiences they provided to students. The types of activities in which students engaged at the work sites during both years of the project are listed in Table 5. Consistently high levels of interaction were reported between the resource persons, employees, and EBCE students (See Items 19 and 20). The average response for these two activities falls in the range between occasionally and frequently. In both years, the highest levels of activity reported were Observing site activities (Item 16) and Actively performing site activities (Item 18). Both of these activities had responses which qualify in the "frequently" category. Individual study (Item 21) and Researching from site materials (Item 17) continued to be utilized less frequently.

The types of instructional supportive services provided by the resource persons are reported in Table 6. The most frequently used activities were Item 9 Talking about activities at the site and Item 13 Assisting students in performing a specific job-related task at the site. Both of these activities fell in the "frequently used" category for the second consecutive year. Discussing job opportunities (Item 7) was done more than just occasionally as it had been in the previous year.

Evaluating the student's assignments (Item 11) and assisting students in planning their assignments (Item 14) continued to be reported as being done "occasionally". Resource persons again reported that they seldom assisted students in non-job related assignments (Item 12), tutoring in an academic area (Item 10) and discussing students' personal problems (Item 8). The standard deviations in the range of 1 indicate some variation in the level of these activities reported by the resource persons. However, the standard deviations of .5 and .7 reported for most frequently used activities would indicate a fairly consistent pattern of utilization of these by all resource persons.

Table 5

Student Work Site Experiences As Described By Resource Persons

How do students spend their time at your site?	Responses					
	$\overline{X}$		SD		N	
	1976-7	1977-8	1976-7	1977-8	'76-7	'77-8
16. Observing site activities	3.6	3.8	0.6	0.6	86	82
17. Researching from site materials	2.9	3.0	0.9	0.8	85	78
18. Actively performing site activities	3.6	3.6	0.6	0.8	85	82
19. Talking with me	3.5	3.5	0.7	0.6	86	82
20. Talking with other site personnel	3.4	3.5	0.7	0.7	85	81
21. Individual study	2.5	2.7	0.8	0.9	78	76
22. Other	2.6	0	1.5	0	8	0

Key:

Frequently = 4
Occasionally = 3
Seldom = 2
Never = 1

Table 6

Supportive Services Provided to EBCE Students By Resource Persons

	Responses					
Statement	$\bar{X}$		SD		N	
	1976-7	1977-8	1976-77	1977-8	'76-7	'77-8
7. Do you talk about job opportunities?	3.0	3.4	0.7	0.7	86	82
8. Do you talk about the students' personal problems?	2.1	2.2	1.0	0.9	84	80
9. Do you talk about activities at your site?	3.7	3.8	0.5	0.5	86	82
10. Do you tutor in an academic area?	2.1	2.1	1.0	1.0	84	78
11. Do you evaluate individual students' assignments?	2.9	2.8	1.1	1.3	84	81
12. Do you assist students in non job related assignments?	2.0	2.1	1.0	1.0	83	80
13. Do you supervise students to perform a specific job-related task at your site?	3.6	3.5	0.7	0.9	86	81
14. Do you help plan student assignments?	3.2	3.0	1.5	1.1	4	80

Key: Frequently = 4 Seldom = 2

Occasionally = 3 Never = 1

1.3 EBCE students will acquire greater career maturity than will the comparison group students.

CMI Attitude Scale. The career maturity inventory scale (CMI) was administered as a pre- and post-test to the EBCE and control groups. The attitude scale measures the feelings and attitudes students have toward making a career choice and entering the world of work. Higher scores on the scale indicate more career maturity. It has also been found that higher scores are related to more realistic and definitive career choices.

The CMI pre- and post-test results for 1976-77 and 1977-78 are given in Table 7. The pretest scores of the control group boys and girls were slightly higher than the EBCE groups'. The mean scores on the post-test continue to be very similar to the mean scores for the national norms.

Table 8 shows the net changes in career maturity during the time between the pre- and post-tests. The score for the EBCE boys indicates a small growth in maturity. The score for the EBCE girls increased to an even greater degree, indicating that they had more realistic and definitive career choices at the end of the year. On-site interviews revealed that many of the girls in the EBCE group were studying and participating in new and often non-traditional occupations. Some reported that they had made significant changes in career choice as a result of their experiences.

The decrease in the control boys' CMI attitude scores suggests that they had less certainty of career choice and were possibly reassessing their career choices.

Interview Data. Interviews with both EBCE and control groups by third party evaluators suggested that the self-knowledge of EBCE students had been expanded more thoroughly and more systematically. EBCE students had had the added advantage of placement at a series of experience sites,

Table 7

Mean Scores on Career Maturity Inventory (CMI) Attitude Scale

Group	Pre-Test						Post- Test					
	$\bar{X}$		SD		N		$\bar{X}$		SD		N	
	1976-7	1977-8	1976-7	1977-8	'76-7	'77-8	1976-7	1977-8	1976-7	1977-8	'76-7	'77-8
EBCE - Girls	37.4	35.0	3.4	4.8	23	30	35.8	37.9	8.9	5.1	23	28
Control - Girls	37.3	39.2	4.4	3.8	14	24	40.5	39.3	3.1	4.8	14	13
EBCE - Boys	35.1	34.3	5.2	4.4	33	35	36.0	35.8	4.5	5.4	33	28
Control - Boys	32.8	37.5	6.2	4.1	25	30	34.4	35.3	5.9	5.2	25	12

National Norms for Grade 12: $\bar{X}$ = 37.2
SD = 4.9

Table 8

Net Change in Mean Career Maturity Index Scores Between Pre- and Post-tests

	1976-7	1977-8
EBCE - Girls	-1.6	2.9
Control - Girls	3.2	0.1
EBCE - Boys	0.9	1.5
Control - Boys	1.6	-2.2

with the opportunity to reconcile fantasy and reality about the nature and suitability of various careers for themselves. Learning coordinators provided follow-up exploration in analyzing why or why not each job experience was sucessful and satisfying. Having to face the discrepancies between their abilities and the requirements of a specific job was a painful but meaningful step in the career maturity process for EBCE students.

EBCE students reported that learning which types of work they did not like was as valuable as finding those they did since it served to bring ultimate choice more clearly into focus. Control group girls tended to report a firm sense of what they wanted to do and how to achieve that goal. Most of their plans involved going to college to prepare for a selected career. A number of boys in the control group, on the other hand, expressed near panic at being in the final month of their senior year without any sense of career direction.

1.4 EBCE students will develop more positive attitudes toward learning environments, themselves, others, and work than will the comparison group students.

Student Attitude Survey Results. The Student Attitude Survey developed by Research For Better Schools, Inc. measures students' attitudes toward their school program, instructional materials, and school facilities. It also assesses their self concept, attitude toward others and feelings toward work.

The results of the pre- and post-tests on the Student Attitude Survey are given in Table 9. The mean score for control group girls was considerably higher than those for the other three groups on the pre-test. On the pre-test, only the mean score of the control girls was in the positive range. On the post-test, all of the means were well within the positive range. Table 10 shows dramatic changes toward more positive attitudes of EBCE group as well as boys of the control group. Attitudes of control girls became even more positive. The increase in positive attitudes among the 1977-8 students stands in sharp contrast to the attitudes of 1976-77 students who showed a general decrease in attitudes toward school, work and self.

Interview Data. Interviews with EBCE students revealed that the number and diversity of their experiences had made them aware that all of one's life roles are governed by rules. In a variety of ways, they had discovered that both school and work have many similar rules and restrictions.

Interviews with control group students revealed their concern for being able to succeed in college or, if they were not college-bound, to get and hold a job. They recognized the school as a resource upon which to draw, although some students admitted that while they recognized and appreciated the school's potential value, they still did not use it to the degree they should.

Based on the interview data and the trends in response patterns on the Student Attitude Scale, the third party evaluators concluded that this objective has been met.

Table 9

EBCE and Control Group Students' Attitudes Toward
School As Measured by the
Student Attitude Survey

Group	Pre-Test						Post-Test					
	$\bar{X}$		SD		N		$\bar{X}$		SD		N	
	1976-7	1977-8	1976-7	1977-8	'76-7	'77-8	1976-7	1977-8	1976-7	1977-8	'76-7	'77-8
EBCE - Girls	292.7	262.6	28.8	20.2	23	32	280.4	309.9	23.1	25.6	23	27
Control - Girls	301.8	283.9	16.8	22.1	14	14	277.4	306.3	13.3	29.8	14	9
EBCE - Boys	285.2	263.8	31.2	19.8	33	24	282.5	303.8	22.9	28.4	33	28
Control - Boys	282.4	261.1	30.0	21.2	25	35	264.5	305.8	18.0	27.6	25	12

#Key: Scores between 280 and 360 are in the positive range on the scale. Scores between 200 and 280 are in the undecided and/or mixed attitude range.

Table 10

Net Change in Mean Student Attitude Survey Scores
Between Pre- and Post-tests

	1976-7	1977-8
EBCE - Girls	-12.3	47.3
Control - Girls	-24.4	22.4
EBCE - Boys	-2.7	40.0
Control - Boys	-17.9	44.7

1.5 EBCE students will exhibit less sex-role stereotyping than will the comparison groups of students.

Socialization Profile Results. The Socialization Profile was administered as a pre- and post-test to all students in the EBCE and control groups. The Socialization Profile is a semantic differential instrument with 36 bi-polar items. The student selects a response between the two statements given in each item. Each statement is scored on a scale from 1 to 7. An example of the statement would be the following.

Strong dislike for   Strong liking for
the color red   1...2...3...4...5...6...7... the color red

On this instrument students were first asked to respond how they perceived the adult male. They put a slash on the scale and marked an M above it. After they had completed the 36 statements based on their perception of males, they went through the same statements again and marked where they perceived females to be on each of the items. The Socialization Profile measures the students' perceptions of male and female aggressiveness, self-direction, self-sufficiency, and competence in business affairs.

Table 11 presents the pre- and post-test perceptions of the EBCE and control group students with respect to females. On the pretest, EBCE boys as well as girls in both groups rated females as being considerably more agressive, self-sufficient, active, and involved than did the control group boys. The mean score of all students increased in their post-test ratings for females. In other words, all students rated females as being more aggressive and self-sufficient. Girls from both groups perceived females as more competent, etc. than did the boys, however. The degree of net change of perceived role of females is shown on Table 12. The results are graphically depicted in Figure 1. The lower set of data in Figure 1 represent the students' perceptions of adult females.

EBCE and Control Group Students' Perceptions of Females

Group	Pre-Test						Post-Test					
	$\bar{X}$		SD		N		$\bar{X}$		SD		N	
	1976-7	1977-8	1976-7	1977-8	'76-7	'77-8	1976-7	1977-8	1976	1977-8	'76-7	'77-8
EBCE - Girls	131.9	121.4	12.1	14.1	23	31	133.3	132.8	13.8	16.4	23	28
Control - Girls	131.2	124.1	10.2	12.1	14	22	128.6	131.9	11.0	15.1	14	7
EBCE - Boys	125.1	121.5	17.4	19.1	33	25	129.5	123.6	16.7	19.8	33	27
Control Boys	122.4	110.4	25.2	18.7	25	33	123.4	120.5	13.7	16.1	25	14
#High Scores indicate more aggressive, self-directed, self-sufficient and competence in business affairs. Minimum possible score = 36 Maximum possible score =252 Neutral Score = 144												

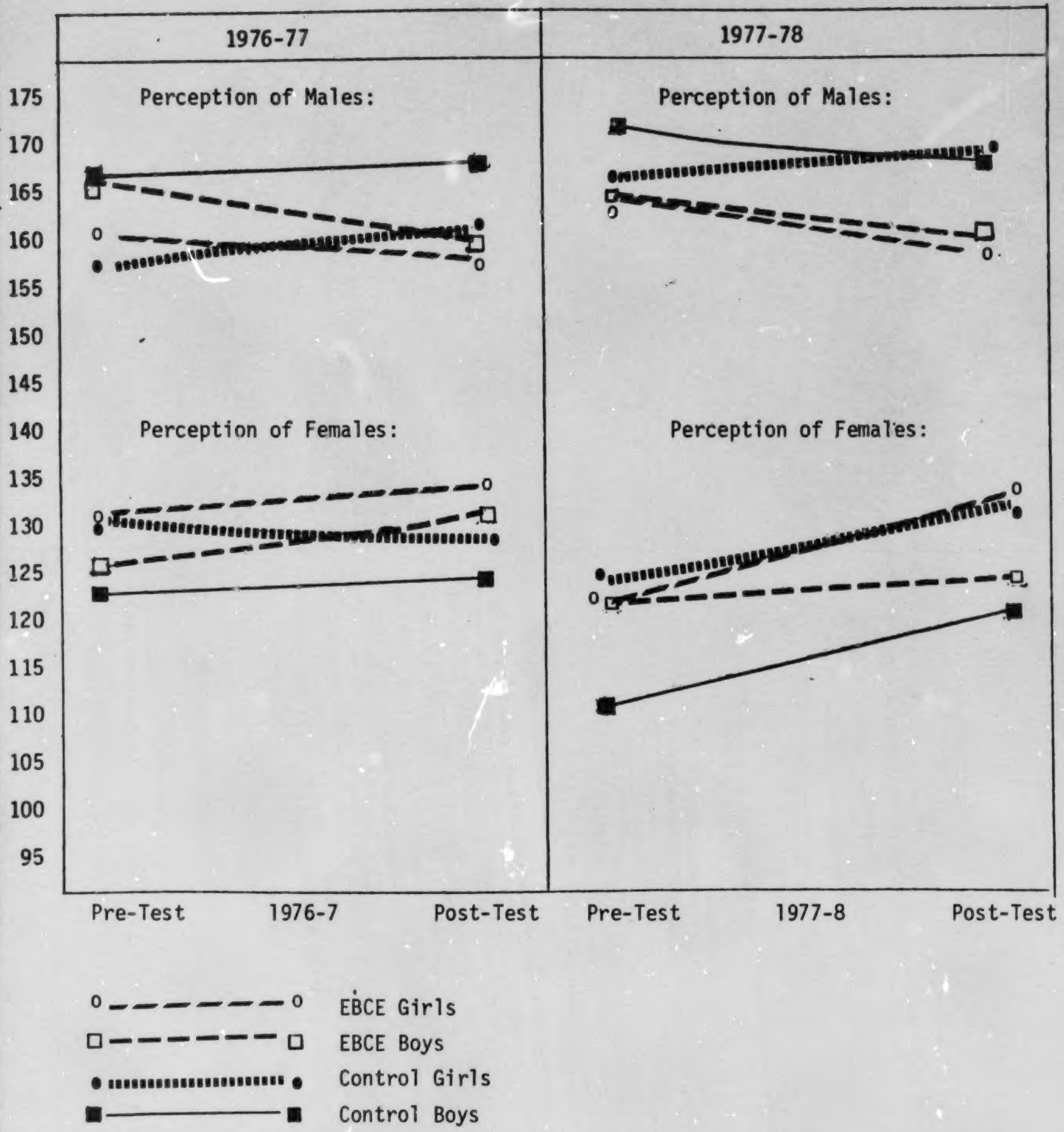
Table 12

Net Change in Mean Scores of Students' Perceptions of Females Between Pre- and Post-Tests

	1976-7	1977-8
EBCE - Girls	1.4	11.4
Control - Girls	-2.6	7.8
EBCE - Boys	4.4	2.1
Control - Boys	1.0	10.1

Figure I

Changes in Students' Role
Perceptions of Men and Women



The EBCE and control group students' perceptions of males are reported in Table 13. The control group rated the males as slightly more self-sufficient, competent in business affairs, and aggressive on the pre-test as contrasted with the EBCE ratings. On the post-test, however, there was a significant difference between the ratings given by the control group and those of EBCE students, indicating major changes in perceptions during the period between the pre- and post-tests. EBCE students perceived males as being less aggressive, less self-sufficient, and less competent in business affairs than the students in the control group. Control group boys also reduced their ratings of males as being aggressive, etc., but to a lesser degree than the EBCE group. Control group girls, on the other hand, reported increased perceptions of male competence. The degree of net change of perceived role of males is shown on Table 14.

The upper set of data on Figure 1 represents the students' perceptions of adult males. A review of Figure 1 shows that students still perceive male and female roles and competence in markedly different ways. Additional educational experiences will be necessary to change these stereotypes in order to achieve equality of career opportunities.

Interview Data. It is the judgment of the third party evaluators that the objective of reducing sex-role stereotyping was met. Evidence exists that EBCE students are being encouraged and aided by EBCE staff in exposure to career experiences which extend beyond the constraints of sex role stereotyping. Interviews with EBCE students and resource persons continue to suggest that there are more students willing to try nontraditional roles than there are employment situations ready to accept them, however. More placements of both male and female students at nontraditional work sites are needed since such placements remain the exception rather than the rule.

Table 13

EBCE and Control Group Students' Perceptions of Males

Group	$\overline{X}$		SD		N		$\overline{X}$		SD		N	
	1976-7	1977-8	1976-7	1977-8	'76-7	'77-8	1976-7	1977-8	1976-7	1977-8	'76-7	'77-8
EBCE - Girls	160.0	164.0	10.3	11.9	23	31	158.4	157.6	12.1	12.2	23	27
Control - Girls	157.6	166.8	9.0	12.5	14	22	161.7	168.3	11.4	11.6	14	7
EBCE - Boys	165.3	164.1	13.8	14.3	33	24	159.9	155.9	15.4	14.3	33	28
Control - Boys	165.5	171.0	13.3	14.1	25	35	167.1	167.1	14.4	10.1	25	14

# High Scores indicate more aggressive, self-directed, self-sufficient and competence in business affairs.
Minimum possible Score = 36
Maximum possible Score =252
Neutral Score = 144

Table 14

Net Change of Students' Perceptions of Males Between Pre- and Post Tests

	1976-7	1977-8
EBCE - Girls	-1.6	-6.4
Control - Girls	4.1	1.5
EBCE - Boys	-5.4	-8.2
Control - Boys	1.6	-3.9

Comparative group students said that they have discussed and received information on alleviating sex role stereotyping but again had the disadvantage of dealing with it on a theoretical basis only. At least some EBCE students, on the other hand, experienced first-hand nontraditional jobs and all in EBCE had the opportunity to observe the role of gender and its social and economic implications among co-workers at each job site.

There was a tendency among female students from both groups to perceive childbearing as the termination point of serious career pursuit. Thus, they view their "career" as having a duration of approximately ten years, usually ending at the birth of a second child. There is a need for guidance in examining career choice with respect to the effect time-out periods for childbearing may have on career advancement. Potential for re-entry and/or the necessity for retraining must be an integral part of discussion of career choice. Resource persons at some work sites have emphasized this point because they are women who have had to deal with the problems of re-entry into the world of work.

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1.6 A follow-up on graduates of the EBCE program will reveal positive attitudes toward learning environments if they are enrolled in post-secondary educational programs, and job satisfaction if they are employed.

Follow-up questionnaires of employment and/or post-secondary school training were sent to the 56 graduates of the 1977 EBCE program. The follow-up survey was designed and administered by EBCE project staff. The survey instruments and item analyses are included in Appendix B . Thirty usable follow-up questionnaires were returned for a response rate of 54 percent. Results reflecting graduates' attitudes toward EBCE are reported in Table 15.

According to data gathered in the follow-up questionnaire, graduates of the first year of EBCE in Fond du Lac reported satisfaction with the decision, certainty, and achievement of their career goals. Mean scores as well as subjective statements revealed positive attitudes toward work. Students agreed that EBCE had helped prepare them for getting and keeping a job and had significantly aided them in their ability to get along with fellow workers and supervisors. While graduates were not altogether certain that EBCE had helped prepared them for college, neither did they suggest that it had impaired their preparation in any way.

Third party evaluators concluded that this objective has been met.

Table 15

Follow-up of 1977 Graduates of EBCE Attitudes Toward Learning Environments

How satisfied are you with:	Responses N = 30	
	X	SD
8. The certainty of my career goals	3.4	0.7
9. The achievement of my career goals	3.2	0.9
10. The overcoming of difficulties in my career	3.2	0.7
11. The path I have followed toward my career goals	3.5	0.6
12. The speed with which I have moved toward my career goals	3.2	0.8

Key:

1 = Very Dissatisfied
2 = Somewhat Dissatisfied
3 = Somewhat Satisfied
4 = Very Satisfied

Perceived effect of EBCE participation:	Responses N = 30	
	X	SD
13. EBCE helped prepare me for work	1.6	0.7
14. EBCE helped prepare me for college	2.2	0.9
15. EBCE helped me become a better person	1.6	0.6
16. EBCE helped me develop my mind	1.5	0.5
17. EBCE helped me in personal adjustment	1.5	0.6

Key:

1 = Strongly Agree
2 = Agree
3 = Disagree
4 = Strongly Disagree

1.7 Parents of EBCE students will have positive attitudes toward the EBCE program.

Parent Survey. Parents of EBCE students were asked to complete the Parent Survey at the end of the school year. A copy of the Parent Survey developed by AEL is included in Appendix A. The results of the survey are reported in Table 16.

Parent responses for 1977-78 were highly consistent with those of the parents of the 1976-77 students. The '77-78 mean scores show even higher regard for the entire program, however, with standard deviations reflecting and even higher level of agreement. The parents' general impressions of EBCE were very favorable: they thought the EBCE program was considerably better than past school experiences (Item 1) and that their children liked the program much better (Item 3). Parents were unanimous in their opinion that their children would enroll in the EBCE program if they had it to do over again (Item 2).

Parents felt that the EBCE program provided their children with much more information and opportunity to learn about occupations (Item 7). Also, they responded that the EBCE program had a very good effect on the career plans of their children (Item 8). The amount of general learning required by the students in the EBCE program was also rated above that received from the typical school program by the parents (Item 9).

Parents thought that their children were considerably more motivated in the EBCE program as contrasted with the regular school program (Item 10). Also, they felt that the approaches to learning used in the EBCE program were very good to excellent (Item 11).

Parents reported a small number of contacts with EBCE staff and other students in the EBCE programs (Items 15 and 16). The standard deviations on these two items were somewhat larger indicating that there was more variability in the number of contacts reported by the parents.

Table 16

EBCE Parents' Assessment of the EBCE Program

Statement	Responses N = 25			
	$\bar{X}$		SD	
	1976-7	1977-8	1976-7	1977-8
1. How well does the EBCE Program compare overall with the past school experiences of your daughter or son?	4.4*	4.5*	0.8	0.6
2. If you had it to do over again, would you want your son or daughter to participate in the EBCE Program?	4.6	5.0	0.9	0.2
3. How well do you think your son or daughter likes the EBCE Program compared with past school experiences?	4.6	4.7	0.8	0.6
6. Have you received enough information about your son's or daughter's progress in the EBCE Program?	4.2	4.5	0.9	0.5
7. In comparison with regular schools, how much opportunity did the EBCE Program provide your daughter or son for learning about occupations?	4.9	4.9	0.6	0.3
8. What effect, if any, has the EBCE Program had on helping your son or daughter form career plans?	4.3	4.3	1.0	0.8
9. In comparison with regular schools, how much opportunity did the EBCE Program provide your daughter or son for general learning?	4.0	4.2	0.9	0.9

*Means and standard deviations are based on a response scale which ranged from 1 = Most Negative to 5 = Most Positive in each item.

Table 16 Continued

Statement	Responses N = 25			
	$\overline{X}$		SD	
	1976-7	1977-8	1976-7	1977-8
10. In comparison with past experiences in regular schools, how motivated is your daughter or son to learn in the EBCE Program?	4.4	4.6	0.8	0.6
11. How would you rate the approaches to learning used in the EBCE Program?	4.4	4.6	0.7	0.5
14. How often does your son or daughter talk to you about what's going on in the EBCE Program?	4.2	4.1	1.0	0.8
15. About how often have you had any contact with any EBCE Program staff members?	2.6	3.2	1.1	1.1
16. How many meetings have you attended during this school year where other parents of EBCE students were present?	1.8	1.9	1.0	0.8
17. How would you rate the general quality of the EBCE Program staff?	4.4	4.8	0.6	0.4
18. How would you rate the business or community resources available in the EBCE Program?	4.1	4.3	0.8	0.6
19. How would you rate your overall relationship with the staff of the EBCE Program?	4.4	4.4	0.8	0.6
20. How would you rate the enthusiasm of the EBCE Program staff?	4.9	4.9	0.4	0.3

Table 16 continued

Statement	Responses			
	%*		N	
	1976-7	1977-8	'76-7	'77-8
21. What do you think of the occupational plans of your daughter or son?				
1. There aren't any firm plans yet	24%	20%	9	5
2. The plans should be changed	3%	0%	1	0
3. The plans seem to be good	73%	76%	27	19
4. We haven't really had a chance to discuss the plans	0%	0%	0	0
22. What do you think your son or daughter will be doing a year after high school?				
1. Working	43%	36%	16	9
2. Attending some kind of college	35%	32%	13	8
3. Going to a business or trade school	27%	28%	10	7
4. Military	2%	4%	1	1
5. Other	2%	0%	1	0

* Some totals equal less than 100% due to no responses to some questions.

Parents indicated that they received more information from their children on the EBCE program than they had on the regular program when their sons and daughters were enrolled in it (Item 6 and 14). (Note: A mean response of 3 on these items would indicate that the amount of information or the evaluation of the EBCE program was the same as the past school program in which the son or daughter had been enrolled. Means above 3.5 would indicate that the EBCE program received higher ratings. The standard deviation indicates the amount of consensus or agreement in the responses given by the parents. The standard deviations of less than one indicate a high level of agreement).

EBCE staff members received very high ratings by parents. Parents felt that the overall staff quality was excellent (Item 17), and that their relationship with the EBCE staff was very good (Item 19). Also, they reported that the EBCE staff had a high level of enthusiasm (Item 20). The small standard deviations on these three items indicate that there was a high level of consensus among the parents concerning these three characteristics of the EBCE staff. The community and business resources available to the EBCE students also received a high rating by the parents (Item 18).

Interview Data. Interviews with parents of EBCE students were consistent with the above data as well as with parents' written responses to open-ended questions on the attitude survey. Parents praised all aspects of the EBCE program: the staff, the work experiences, student growth, etc. The only criticisms of EBCE were (1) that it is not available to all students, and (2) the social and geographic isolation of EBCE students from Goodrich High School. Overall, however, parents give wholehearted support to the EBCE concept. They attribute to participation in EBCE many positive changes in their children, such as increased maturity, self-directedness, independent thinking, career decisions, responsibility, and poise and confidence in meeting new situations.

This objective was met by the EBCE program.

1.8 Experience site resource persons and contact persons will have positive attitudes toward the EBCE program.

Employer Questionnaire. The employer questionnaire developed by AEL was sent to each of the participating businesses and industries in the Fond du Lac EBCE program. The questionnaire requested the resource persons to provide information on the impacts of EBCE on their companies, their evaluation of the program, and other data needed in the administration of the program.

The resource persons expressed very positive opinions about all aspects of the EBCE program. Mean scores on the employer questionnaire were nearly identical to those from last year's survey. They believed, for the most part, that students had been interested in their site assignment at the resource person's place of employement (Item 23 in Table 17), as well as in the concept of EBCE itself (Item 24). While resource persons expressed frustation with students who were disinterested, passive, or extremely dependent, they also recognized that one hundred percent involvement and commitment of students to any educational program is the ideal rather than the real.

Resource persons expressed very positive responses to whether the EBCE program had functioned as they were informed it would (Item 30). They believed that their company would continue working with the EBCE project (Item 28), based on their own support of it as well as the endorsement of EBCE principles by top level management of the businesses they represent. Resource persons stated that they view EBCE as a worthwhile, highly effective program which is beneficial to both students and persons at the experience site. Even those businesses which derive no perceptible benefit from EBCE participation justify continued involvement as a contribution to an improved future work force and participation in a valuable community activity.

Resource persons reported in Item 27 of Table 17, as well as in several

Table 17

Resource Persons' Evaluation of EBCE

Statement	Responses					
	$\bar{X}$		SD		N	
	1976-7	1977-8	1976-7	1977-8	'76-7	'77-8
23. Do you think the EBCE students have been interested in your site?	1.2	1.2	0.5	0.5	84	79
24. Based on the EBCE students placed at your site, do you feel these students were interested in the concept of EBCE?	1.2	1.2	0.5	0.4	85	81
27. Have you been satisfied with the feedback that you received relating to what happens to the students after he leaves your site?	2.0	2.1	0.8	0.8	71	72
28. Do you think your company will continue working with the EBCE project during the next couple of years?	1.3	1.2	0.5	0.4	84	81
30. Do you feel the program functioned as you were led to believe when you were recruited as an employer site?	1.3	1.1	0.6	0.3	84	80

Key: 1 = Yes
2 = Don't Know
3 = No

open ended statements of the questionnaire, that they wanted more feedback on student progress during and after placement at their sites and student evaluation of the site experience. Resource persons also requested feedback on their own performance as a resource person to enable them to do a better job in that role. Because this perception of inadequate feedback was also cited as a weakness of the EBCE program in the employer survey of 1976-77, the third party evaluators recommend that the Fond du Lac EBCE project staff reexamine their current procedures for communication with resource persons. It is suggested that there be increased efforts to provide input and feedback to resource persons of student progress, learning activities and follow-up, as well as about the resource person's own performance. Table 18 includes the impacts that the resource persons reported as a result of participating in the EBCE program. The resource persons reported a slight impact on the quality of work performed by regular employees (Item 35-36) and company training practices (Item 39-40). The value of these impacts was reported to be good, however. Response patterns of the resource persons were consistent with those received during on-site interviews conducted by the third party evaluators at ten representative experience sites. Resource persons reported that other employees have reacted favorably to student placements, accepting the student as a new employee in one sense, yet feeling a sense of responsibility and spirit of helpfulness for his/her learning in another sense.

Table 18

Resource Persons' Report of Impacts of EBCE Participation on Their Firms

To what extent has the EBCE Program had an impact on?	How much Impact?						Value of Impact?					
	$\bar{X}$		SD		N		$\bar{X}$		SD		N	
	1976-7	1977-8	1976-7	1977-8	'76-7	'77-8	1976-7	1977-8	1976-7	1977-8	'76-7	'77
33-34 Quality of work performed by regular employees	2.5	2.4	0.8	0.8	78	78	2.5	2.5	0.6	0.7	58	58
35-36 Amount of work performed by regular employees	2.5	2.6	0.8	0.7	79	78	2.5	2.4	0.6	0.8	55	53
37-38 Company hiring practices	2.0	2.1	0.6	0.7	77	77	2.1	2.3	0.4	0.4	52	50
39-40 Company training practices	2.5	2.6	0.7	0.8	74	77	2.6	2.5	0.5	0.5	53	58
41-42 Other possible impacts	1.4	2.4	0.5	1.4	5	10	2.0	2.5	0.0	0.5	3	10
	Key: 1 = Don't know 2 = No Impact 3 = Some Impact 4 = Much Impact						Key: 1 = Bad Impact 2 = Don't Know 3 = Good Impact					

Interview Data. Resource persons' statements during on-site interviews with third party evaluators were consistent with responses to the employer questionnaire and reflected their satisfaction with all aspects of the program. Resource persons seem conscientious in exposing students to a comprehensive and realistic experience at their place of employment. The positive attitudes of resource persons and contact persons toward EBCE are also evidenced by the high retention rate of sites from 1976-77 to 1977-78. The third party evaluators concluded that this objective was met.

1.9 EBCE dissemination workshops will provide adequate information to those attending.

Sixteen EBCE dissemination workshops were presented to various educational groups throughout Wisconsin between September, 1977 and March, 1978. Approximately 400 persons participated in the "Double Feature" workshops sponsored jointly with the Department of Public Instruction's State Plan for Career Education.

The EBCE portion of each workshop consisted of a slide/tape series on the Fond du Lac EBCE project; an overview of the project's origination, purpose and continuation; definitions and descriptions of components of EBCE; distribution of EBCE materials; and a question and answer session.

A total of 317 questionnaires eliciting opinions about the adequacy of the workshop presentation on EBCE were returned by participants. Analysis of the responses indicated that the concept of EBCE as well as the manner in which it was presented were enthusiastically received throughout Wisconsin. Workshop participants viewed the opportunities for career exploration which EBCE allows as its single greatest strength EBCE's ability to provide realistic learning experiences and alternate forms of education, to increase student motivation, and to help students make career choices were also listed as major strengths. The EBCE project staff itself, in conjunction with EBCE materials, appear to have been the most effective disseminators of information about the nature and purpose of the project.

The major drawbacks of EBCE perceived by workshop participants were uncertainty about the adaptability of EBCE programs in rural areas and concern for the high cost of staffing such a program. An Item Analysis of the Dissemination Workshop Questionnaire is included in Appendix C.

Other successful dissemination activities conducted by the EBCE staff included presentations to (1) graduate and undergraduate career education classes throughout Wisconsin's university system; (2) UW-Stout department chairpersons with whom the need for pre-service and inservice college programs to prepare teachers, counselors, and administrators to work with EBCE was discussed; and (3) a two-day orientation to persons interested in the EBCE concept and the various EBCE models as well as strategies for implementation into local school districts.

Summary of Student Outcome Objectives

Third party evaluators conclude that all student outcome objectives of the 1977-78 Fond du Lac EBCE project have been achieved.

ACCOMPLISHMENT OF EBCE PROCESS OBJECTIVES, 1977-78

2.1 The EBCE Management-By-Objectives system will be utilized.

The project staff have continued to use the EBCE management by objectives system as modified in the previous year of the project. It has been updated to current project needs.

On-site interviews with project staff revealed that they had well defined objectives as well as ideas on how to accomplish them. The objectives developed by the staff were used to manage their time, efforts, and resources.

The third party evaluators found that the project was well managed, communications between staff members were excellent, and the level of motivation was very high. These characteristics are also reflected in the data reported for the outcome objectives. For example, in Table 16 Parent Opinion Survey, parents reported that the EBCE staff was effective and enthusiastic (Items 17 and 20). Participants of the Dissemination Workshop also reported the excellence of EBCE presentations and materials.

It is the conclusion of the third party evaluators that this objective was met.

2.2 A representative sample of total student population at 11th and 12th grade will be identified.

The grade point averages for males and females in the EBCE and Control groups are reported in Table 19. An analysis of the differences in the grade point averages indicated that the EBCE girls' GPA was significantly lower than that of girls in the control group. There was no significant difference between control group and EBCE boys' grade point averages. However, nor was there a significant difference between GPAs for either group. Standard deviations were also slightly consistent for both groups and gender.

Overall, the differences in GPA between the EBCE and the Control group was less than one-tenth of a point. Therefore, the actual difference in level of performance may be unnoticeable.

The data reported in Section One indicated that the EBCE and Control groups came from the same population. There were no significant differences in the reading and math scores on the pre- and post-tests for the students in the two groups. As also noted in Section One, the mean scores for the two groups were not significantly different from the means for national norms.

Interview Data. Third party evaluators' observations and interviews with students in each group suggested that students who chose EBCE may tend to be more adventuresome and less conforming. EBCE students expressed unwillingness to accept another year of classroom instruction in the traditional mode which some perceived as restrictive at that point in their lives. Control group students, on the other hand, tended to be more tolerant of and acquiescent toward another year in a "known" educational environment. They cited proximity to friends, participation in extracurricular activities, and need for specific college-prep classes as overriding reasons for not choosing an alternative educational experience.

Table 19

Grade Point Averages (GPA) for EBCE and Control Group Students

GROUP	GENDER 1977-78						GROUP TOTAL					
	Boys			Girls			1977-78			1976-77		
	$\bar{x}$	SD	N	$\bar{x}$	SD	N	$\bar{x}$	SD	N	$\bar{x}$	SD	N
EBCE	2.02	0.5	24	2.22[a]	0.7	26	2.12[b]	0.6	50	2.19[c]	0.7	56
Control	1.93	0.5	29	2.63[a]	0.7	19	2.21[b]	0.7	48	2.50[c]	0.7	39
Gender Total	1.97[d]	0.5	53	2.39[d]	0.7	45						

[a] There is a significant difference ($P < .05$) between grade point averages of EBCE and Control girls.

[b] No significant difference ($P < .05$) between grade point averages of EBCE and Control groups.

[c] Control group had a significantly higher grade point average ($P < .05$) on a two-way analysis of variance.

[d] A significant difference ($P < .01$) exists between the grade point averages of all female students and all male students.

2.3 A mechanism to periodically update the Fond du Lac community about EBCE experiences will be developed and implemented.

Radio, TV and newspaper articles as well as periodic editions of the EBCE newsletter kept the community informed on project activities during the 1977-78 school year. The newsletter typically included lists of experience sites, pictures and features on students' site experiences and subsequent growth, and interviews with staff and resource persons.

Community awareness of and support for EBCE is evidenced by the growing number of businesses which volunteer to serve as experience sites, as well as the high retention rate of existing sites.

2.4 AEL/EBCE concepts and objectives will be used.

A number of the AEL published materials have been adapted and rewritten by Fond du Lac EBCE staff to better meet specific local needs. The focus is on changes in procedure and organization, however, rather than change in concepts and goals. AEL concepts and objectives have been retained. Third party evaluators, therefore, concluded that this process objective has been met.

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2.5 Activity Sheets will be used to document and monitor student academic progress.

Third Party review of student folders indicated that activity sheets continue to be used in appropriate ways and correct form. The activity sheets showed evidence of evaluation by Learning Coordinators and served as an effective monitor of each student's academic progress while in the EBCE program.

Students received a substantial amount of experience in writing reports and other narrative statements as they completed activity sheets. Activity sheets were also used this year to develop competencies in various functional life skills which involve math and/or reading skills. The competency-based component of the EBCE program is treated more extensively in Objective 2.8.

2.6 AEL/EBCE's inquiry model will be used.

During interviews with the third party evaluators, EBCE students were asked what the inquiry model was and how it was used. Students consistently described it as a way of approaching problems on their Activity Sheets which at first was hard to use and seemed unnecessary, but which became much easier as they gained experience in using it. Some students said the inquiry model has become for them a routine, spontaneous way of approaching any new problem.

Review of a sample of activity sheets substantiated that the five steps of the inquiry model were consistently incorporated into student's written work.

2.7 EBCE students will have an individualized and personalized program.

Third party evaluators assessed the degree to which Learning Coordinators individualized each EBCE student's academic program by comparing folders and activity sheets of students placed at different times at a given experience-site. The review documented that Learning Coordinators did consistently tailor each student's instructional program to his/her specific needs, interests, and goals. Learning Coordinators made greater use of various diagnostic tools and equipment in individualizing instruction and meeting special needs this year.

Interviews with students in the control group revealed that their academic program is not individualized. Most students reported that in their classes all students receive the same instruction and assignments.

Learning Coordinators remain enthusiastic about the opportunity for individual contact with students allowed by EBCE. As students with an ever greater range of abilities enter the program, however, Learning Coordinators perceive the need for specially trained staff to assist them in providing learning experiences for students with special educational needs.

2.8 Activity Sheets will be written.

Design of the EBCE students' Activity Sheets continued to spring from needs related to their current site placements.

Competency-based instruction was also added to students' learning activities this year. Fond du Lac EBCE Learning Coordinators selected 17 basic life skill competencies to be mastered by students in addition to the other subjects and concepts in the EBCE curriculum. Each of the three Learning Coordinators generated one or more "standardized" Activity Sheets for all 17 competencies. The standardized Activity Sheets define the limits of what students are expected to accomplish with respect to each competency. The sheets can be used as is by all students or they can serve as a point of departure for individually designed Activity Sheets.

2.9 A student career guide will be used by EBCE students.

Interview Data. Discussion with EBCE students indicated that they were following a planned sequence of career development experiences. Review of their learning materials during the on-site visits revealed that the career guide was consistently utilized by students.

The third party evaluators concluded that this objective was completed.

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2.10 The EBCE Request for Placement form will be used.

Interview Data. Review of Fond du Lac project placement coordinator's materials indicated meticulous compliance with EBCE placement procedures. Placement forms were used for each student at every placement site, and new forms were issued if a student chose to extend the original placement period. On-site interviews with resource persons and students also indicated that the placement procedures were carried out effectively.

The EBCE staff conducted an orientation session for resource persons at the beginning of each semester to establish the role and responsibility of the resource person to the EBCE student's learning experience during the period of placement.

The third party evaluators concluded that this objective was met.

2.11 Activity Sheets will be interdisciplinary.

Third party evaluators reviewed activity sheets in student folders and concluded that learning activities are interdisciplinary in nature. The activity sheets consistently required development of skills from two or more subject areas as well as a variety of learning activities.

This objective has been met.

2.12 Worker Trait Groups will have been assigned to experience site resource persons.

Worker trait group categories were assigned to each resource person on the basis of their job descriptions and functional responsibilities. This information was recorded in the experience site log book maintained in the Fond du Lac EBCE project office where students had access to it in the selection of placement sites.

While worker trait groups and assessment tools provided in the AEL materials were used to greater advantage this year in placing students at work sites, students need still more encouragement in taking an independent and comprehensive look at various factors involved in career choice: interest, ability, and accessibility, rather than making site selections so exclusively on the basis of interest and/or availability.

The third party evaluators concluded that this process objective has been met.

2.13 Learning Coordinators will make regular site visits.

Learning Coordinators reported that they made weekly site visits to new or "problem" placements but sometimes made biweekly visits thereafter. Learning Coordinators also used telephone contacts to Resource Persons to monitor student progress and performance at experience sites. Resource Persons corroborated the Learning Coordinators statements and indicated that Learning Coordinators emphasize that they should be called if any questions or problems arise.

The third party evaluators concluded that this objective was met.

2.14 The Community Advisory Council will meet once a month.

Third party evaluators attended one of the Community Advisory Committee's regular meetings. Attendance at the meeting was excellent, with representation from all segments of the Fond du Lac area: labor unions, vocational-technical school, parochial secondary schools, industry (labor and management), elementary school teachers, school administrators, newspaper, community and civic organizations, parents, EBCE staff, EBCE student, Goodrich High School counselor.

Advisory committee members were enthusiastic in their support for EBCE, expressing their satisfaction with the way it draws community resources into education and education into the community. One member recommended a summer EBCE program for students who can't or don't want to leave the traditional school program during the school year. Advisory committee members asked questions about procedures for handling various student and work situations to which other members volunteered ideas or their position or resources to resolve "problems" such as union restrictions, publicity needs, etc.

2.15 Training of Fond du Lac's EBCE personnel will have been accomplished according to an established timetable.

The timing of project personnel's training as well as the adequacy of that training was accomplished in conformance with the project's timetable and thus allowed the project to flow smoothly and effectively without interruption.

Reassignments and/or additions to the project staff were necessitated as the project added the emphasis on dissemination. The project's original placement coordinator (Pat Cibik) became the outreach coordinator and gradually assumed the outreach responsibilities formerly performed by the project director alone. His training, as well as that of the new placement coordinator, were accomplished on-the-job with the "trainee" working directly with the person who formerly held the position, with close contact with the Project Director maintained at all times. A new Learning Coordinator was hired to replace one who began revision of EBCE materials for Wisconsin schools planning to launch EBCE programs. Her training too was guided by working directly with the learning coordinators as well as reference to the AEL/EBCE materials and caused no break in the forward movement of the project.

Another aspect of a training program in which the Learning Coordinators participated was an exchange program in which they visited other EBCE programs in other parts of the United States to share and compare differences and similarities of ideas, operation, and materials.

Planning, study, and preparation are well underway at the end of this project year for the staff to provide technical assistance to systems wishing to utilize the EBCE concept.

2.16 OSHA regulations will be considered in making student placements at experience sites.

Third party evaluators concluded that the safety and well-being of EBCE students' work experiences were closely monitored. The Placement Coordinator/Experience Site Analyst maintains a book of OSHA regulations, child labor laws, and other state regulations. Against those rules she routinely evaluates any potential experience site activity in which a student may participate. Any restrictions in the degree of allowable student participation (exploratory, assisting, etc.) are then specified in the Experience-Site Guides.

Prior to each placement, resource persons and learning coordinators are reminded verbally of these restrictions by the placement coordinator, and the restrictions and precautionary advice also appear in writing on each placement form. Any experience sites which fail to provide a safe environment for EBCE students are dropped.

On-site visits indicated that resource persons are keenly aware of the need to comply with OSHA and other regulatory standards governing the safety of students placed at their sites.

This objective has been met.

2.17 Students are placed at experience sites four days per week for every week assigned to a particular site.

Students report to their experience site four days out of every five for the duration of each placement. They worked the hours of the resource person on days at the site. Resource persons were instructed to report any student absence to the EBCE office staff which monitored attendance. Learning coordinators during site visits also checked whether students had been on the job. Students reported to their learning coordinator for the inhouse instruction on the fifth day of each week.

Third party evaluators concluded that proper placement and attendance procedures were followed.

2.18 Sex role stereotyping will be confronted whenever and wherever it is found in site placements and counseling, and dealt with in a constructive manner.

Third party evaluators concluded that this objective has been met. Learning Coordinators have designed instruction involving Activity Sheets and large and small group activities to reduce students' sex role stereotyped concepts and to increase their awareness of opportunities in nontraditional occupations for men and women.

Responses of EBCE students reported in Objective 1.5 indicate that their career choices are not limited by their own perceptions of sex role. The Placement Coordinator, however, still encounters instances of businesses refusing to place female students at male dominated sites. She reports that small, locally owned businesses are those most likely to reject a student for placement on the basis of sex. Experience sites comprised of relatively young employees or from large industry rarely make such restrictions, she reported.

Contact persons who flatly refuse to accept a student on the basis of sex pose a dilemna for project personnel, forcing them to decide whether to discontinue the site. Dropping the site is perceived as a poor solution, however, since it then is not available to students of either sex, and the channels of communication are severed so there is no opportunity for future change.

Several resource or contact persons who were resistant though not adamantly opposed to placement of certain sexes have been won over in the past two years by gradual, diplomatic attempts to change their attitudes. Placement of carefully chosen students have counteracted their resistance and resulted in successful placement of students in nontraditional work roles.

Control group students reported that they were aware of sex role stereotyping but that they did not feel their opportunities to be restricted by them. They had no experience to verify those views, however, nor had they had systematic instruction in the issues or opportunities in nontraditional careers.

2.19 EBCE Project will conduct workshops and host visitors for representatives from school districts in Wisconsin.

Brochures and invitations to visit the Fond du Lac EBCE program were sent to most school systems and vocational education personnel in Wisconsin. A one- and two-day agenda were designed for on-site visitors to observe the EBCE program in operation and to discuss strategies for adopting the program in their area.

Visitors and participants represented diverse aspects of educational interests, ranging from classroom teachers of regular and special education, counselors, university teacher educators, vocational educators and coordinators, graduate students, administrators, Department of Public Instruction consultants, as well as representatives from citizen organizations, employment agencies, rehabilitation agencies, and regional educational service agencies.

Fond du Lac EBCE project staff have published and distributed many materials explaining the sequence of steps in the development and implementation of an EBCE program. Recipients of these materials have expressed appreciation for the quality and thoroughness of these materials.

This objective has been achieved. The activities involved in its fulfillment are further amplified in objective 1.9, to which it is closely related.

APPENDIX A

AEL Instruments

APPENDIX B

Followup of 1977 EBCE Graduates' Attitudes

FOLLOW-UP OF EBCE GRADUATES OF 1977

Analysis by Third Party Evaluators

Data gathered from responses to follow-up questionnaires of 30 graduates of the 1977 EBCE program reveal that Objective 1.6 has been met: The graduates show satisfaction and positive attitudes toward work and/or school environments.

The demographic and attitudinal data on the 30 graduates is presented below within the spaces of each question of the three survey instruments. Items on the three instruments have been numbered continuously to facilitate computer analysis. Each instrument still retains its own title, however.

There were 30 responses to the EBCE Graduate Questionnaire, with 24 graduates (80%) also completing the Employment Questionnaire (blue), while 19 graduates (63%) completed the Post-High School Training Questionnaire (green). Some individuals responded to both the Employment and Training questionnaires, thus accounting for figures which total more than 100%. Those who did not respond to a given questionnaire appear as "OMIT" on the computer printout and were therefore not included in the mean.

EBCE GRADUATE QUESTIONNAIRE

(Items 1-18)

1. Marital Status

    1. 97% Single
    2. 3% Engaged
    3. 0 Married

2. How many full time jobs have you had?

    1. 37% None
    2. 37% One
    3. 23% Two
    4. 0 Three
    5. 3% Four or more

3. With whom do you live?

    1. 67% Parents
    2. 3% Relatives
    3. 3% Friend(s)
    4. 17% Alone
    5. 0 Husband or wife
    6. 10% Other

4. How often have you voted in a public election?

    1. 33% Not old enough
    2. 20% Once
    3. 7% Twice
    4. 0 Three or more times
    5. 10% In all elections that I was eligible for

5. Are you a volunteer worker for organizations?

    1. 20% Yes
    2. 7% No, but I'd like to
    3. 70% No

When you look back and compare the course of your career so far with people about your age, are you: (check one)

1. ____________ much less satisfied with your career than they are?
2. ____________ somewhat less satisfied with your career than they are? MEAN = 4.0
3. ____________ about as satisfied with your career as they are?
4. ____________ somewhat more satisfied with your career than they are? SD = .82
5. ____________ much more satisfied with your career than they are?

When you compare how the rest of your career is likely to turn out with how the careers of people about your age are likely to turn out, are you: (check one)

1. ____________ much less satisfied than they are?
2. ____________ somewhat less satisfied? MEAN = 4.2
3. ____________ about as satisfied?
4. ____________ somewhat more satisfied? SD = .91
5. ____________ much more satisfied than they are?

- 12. The statement below describes different types of career achievement. Please circle the appropriate number to show how satisfied you are with each of these career achievements.

	(1) Very Dissatisfied	(2) Somewhat Dissatisfied	(3) Somewhat Satisfied	(4) Very Satisfied
The certainty of my career goals	MEAN =	3.4	SD =	.67
The achievement of my career goals		3.2		.85
The overcoming of difficulties in my career		3.2		.66
The path I have followed toward my career goals		3.5		.57
The speed with which I have moved toward my career goals		3.2		.77

- 17. The statements below are descriptive of various ways in which the EBCE Program you participated in may or may not have assisted you. Please circle the appropriate number to show how much affect the EBCE Program had on you.

	(1) Strongly Agree	(2) Agree	(3) Disagree	(4) Strongly Disagree
EBCE helped prepare me for work	MEAN =	1.6	SD =	.68
EBCE helped prepare me for college		2.2		.85
EBCE helped me become a better person		1.6		.57
EBCE helped me develop my mind		1.5		.51
EBCE helped me in personal adjustment		1.5		.58

18. Your main present\activity (check one)

1. 37% Working full time (answer blue questionnaire)
2. 0 Working part time (answer blue questionnaire)
3. 0 Working housewife (answer blue questionnaire)
4. 40% Working and going to school (answer blue and green questionnaire)
5. 20% Going to school only (answer green questionnaire)
6. 0 Housewife only (answer blue and green questionnaire)
7. 3% Unemployed - looking for work (answer blue and green questionnaire)
8. 0 Unemployed - not looking for work (answer blue and green questionnaire)

EBCE Graduate Employment Questionnaire

(Items 19-56)

How many full-time jobs (30 or more hours per week) have you held since you left the EBCE program?

19. 1. 23% None
2. 40% 1 full-time job
3. 13% 2 full-time jobs
4. 7% 3 or more full-time jobs

20. How closely did your first job after graduating relate to your EBCE experience? (Check only one)

1. 50% I was employed in an occupation in which I had EBCE experiences
2. 0 I was employed in a related occupation
3. 33% I was employed in a completely different occupation

21. Did the EBCE program adequately prepare you for your first job?

1. 53% yes 2. 27% no

22. What was your beginning hourly wage on the first job you had after graduation?

1. 7% $1.59 or less per hour
2. 3% $1.60 to $1.99 per hour
3. 17% $2.00 to $2.49 per hour
4. 20% $2.50 to $2.99 per hour
5. 23% $3.00 to $3.99 per hour
6. 3% $4.00 to $4.99 per hour
7. 0 $5.00 or more per hour

MEAN = 3.82

SD = 1.33

23. How did you get your first job after leaving the EBCE program? (Check one)

1. 37% I got the job myself
2. 20% I am employed by an EBCE site
3. 10% My family or friends helped me get the job
4. 10% The EBCE program helped me get the job
5. 3% An employment agency helped me get the job
6. 3% Other (specify)

What is your present field of work?

____

What is your present job title?

____

What is the name of the company you presently work for?

____

. What is your present hourly wage?

1. 0 $1.59 or less per hour
2. 3% $1.60 to $1.99 per hour
3. 17% $2.00 to $2.49 per hour
4. 17% $2.50 to $2.99 per hour
5. 27% $3.00 to $3.99 per hour
6. 10% $4.00 to $4.99 per hour
7. 0 $5.00 or more per hour

MEAN = 4.32

SD = 1.13

. What is your main reason for working?

1. 27% Support self or family
2. 30% Money
3. 7% Experience
4. 13% To have a career
5. 0 It's interesting
6. 0 Other

MEAN = 2.09

SD = 1.08

. Would you like to work at your present job 5 years from now?

1. __________ Definitely
2. __________ Probably
3. __________ Uncertain
4. __________ Probably not
5. __________ Definitely not

MEAN = 3.65

SD = 1.43

. How many hours do you work a week (average)?

1. __________ 1 - 4 hours
2. __________ 5 - 10 hours
3. __________ 11 - 20 hours
4. __________ 21 - 30 hours
5. __________ 31 - 40 hours
6. __________ over 40 hours

MEAN = 4.61

SD = 1.20

. How much difficulty did you have getting work?

1. __________ No difficulty
2. __________ Some difficulty
3. __________ Much difficulty

MEAN = 1.22

SD = .42

. Would you rather have some other job?

1. 40% yes 2. 37% no

. If yes, what kind of job would you prefer?

1. 10% The same kind of work, but for a different kind of employer
2. 27% A different kind of work

. Have there been any jobs you tried for but didn't get?

1. 33% yes 2. 50% no

If yes, why do you think you did not get the job or jobs?

____

____

____

____

2-56. Below are listed some items describing various aspects of jobs. Please circle for each item, the number that best describes how satisfied you are with this aspect of your present job.

1 = Very dissatisfied
2 = Fairly dissatisfied
3 = Neither satisfied nor dissatisfied
4 = Fairly satisfied
5 = Very satisfied
NA = Not applicable

	Very Dissat.				Very Sat.	Not Applicable	MN	S
2. Earnings	1	2	3	4	5	NA	3.7	.9
3. The duties of the job	1	2	3	4	5	NA	3.6	.6
4. Job security	1	2	3	4	5	NA	4.1	1.0
5. The amount of responsibility I have	1	2	3	4	5	NA	4.1	.9
6. The amount of variety in my work	1	2	3	4	5	NA	3.8	.9
7. The amount of prestige I have	1	2	3	4	5	NA	3.4	1.0
8. The degree of difficulty of my work	1	2	3	4	5	NA	3.6	1.1
9. The work load	1	2	3	4	5	NA	3.4	1.0
0. Opportunity for promotion or advancement	1	2	3	4	5	NA	3.5	1.
1. Benefits (insurance, sick pay, pension plans, etc.)	1	2	3	4	5	NA	3.6	1.
2. Opportunities to use my initiative or judgment	1	2	3	4	5	NA	4.0	.9
3. Opportunities to use my knowledge and abilities	1	2	3	4	5	NA	3.7	1.4

							MN	SD
Opportunities to share interests with those in my line of work	1	2	3	4	5	NA	3.5	1.25
Getting along with fellow workers	1	2	3	4	5	NA	4.5	.78
Getting along with those under me	1	2	3	4	5	NA	4.4	.85
Getting along with other people I meet in my work	1	2	3	4	5	NA	4.4	.66
The kind of supervisor I have	1	2	3	4	5	NA	4.3	1.12
Opportunities to manage or supervise other people and activities	1	2	3	4	5	NA	3.5	1.13
The degree to which my job enables me to live the kind of life I want	1	2	3	4	5	NA	3.5	1.10
Opportunities to benefit others through my work	1	2	3	4	5	NA	3.4	1.07
Physical working conditions	1	2	3	4	5	NA	4.0	.93
Opportunities to be creative and inventive	1	2	3	4	5	NA	2.8	1.31
Opportunities to do a good job	1	2	3	4	5	NA	4.5	.72
My skill at working with people	1	2	3	4	5	NA	4.1	1.07
Other ______________________	1	2	3	4	5	NA		

What specific things about the EBCE program have you found to be the most useful to you in your present job?

Based on your experiences, what suggestions do you have for improving the EBCE program?

EBCE Post High School Training Questionnaire

(Items 57-62)

7. What type of training program are you now participating in? (Check one)

1. 0 Trade school
2. 0 Business School
3. 33% Vocational or technical school
4. 10% Junior or community college
5. 10% 4-Year college or university
6. 7% Other (specify) ____

3. What is the main training program you plan to complete? (Check one)

1. 7% Trade or business school
2. 30% Vocational or technical school
3. 0 Some college
4. 0 Junior or community college
5. 17% 4-Year college
6. 3% Master's Degree (or 5-year program)
7. 0 Doctor's Degree (or 7-year program)
8. 7% Other (specify) ____

. How much difficulty did you have in getting in the school?

MEAN = 1.11
SD = .32

1. ____ None 2. ____ Some 3. ____ A Great Deal

If you marked Some or A Great Deal, would you briefly explain ____

0. What is your main reason for going on to school? (Check one)

1. 47% To pursue a chosen career
2. 13% To find a career
3. 0 Could not find work
4. 0 Did not know what else to do
5. 0 Parent or friends pressure
6. 3% Other (specify) ____

1. How well did the EBCE program prepare you for your training program?

MEAN = 1.53
SD = .61

1. 33% Very helpful
2. 27% Somewhat helpful
3. 3% Not helpful

2. What career area are you now pursuing?

1. 7% None
2. 53% Specific career (explain) ____

23.	Present Field of Work	Present Job Title	Name of Company You Work For
1.	Security Guard	Security Guard	F.D.L. County
2.	Banking	Teller and part time odd jobs worker	National Exchange Bank & Trust
3.	Intended Occupation Vet.	Cashier	H.C. Prange Co.
4.	Part time job at the Chadbourne Dorm Cafeteria	Student worker	U.W. Food Service
5.	Sears, Roebuck & Co., Mpls. MN	Stockman - Catalog Orders	Sears, Roebuck & Co., Mpls. MN
6.	Printing	Press person	Econo-Print
7.	The Strecth Truck Wash	Truck Washer	Spaple Wash
8.	Part time Zaro Bell, Ideal Auto Body in summer	Counter help	Zaro Bell
9.	Drafting	Drafting person	Tesch Tesch & Assoc.
10.	Part time custodian and full time student	Student & custodian	Fond du Lac, County
11.		Waitress	Marein's Restaurant
12.	Auto mechanics	Part-time mechanic	J.C. Penney
13.	None	None	None
14.	Elks, bussing dishes	none	Elks Club
15.			
16.	working at Pizza Ville	Cook, waitress, make pizzas	Pizza Ville
17.	Cook in the Army	Cook	Army
18.		Pricing	Royal Brass
19.	Engineering	Clerical Draftsman	Wisconsin Telephone Company
20.	Sheetmetal	Sheetmetal assembler	Damrow Co.
21.	Housekeeping	Maid	Holiday Inn
22.	Tolibia Cheese (Blue Cheese Dept.)		Tolibia Cheese
23.	Nursing	Nurses Aide	Care Center West & East
24.	Military Police Corps. U.S. Army	Military Police	United States Government
25.	Maintenance	Maintenance Helper	Bestt Rollr Inc.
26.	Motorcycle mechanics & starting some sales work	Motorcycle mechanic	Modern Motors
32.	Working on CRI machines	Data Entry Operator	A.C. Nielson Company
33.	Auto Mechanics	Pump Attendent	Laning's Texaco

31. Have there been any jobs you tried for but didn't get?
If yes, why do you think you did not get the job or jobs?

1. Application still waiting at SOO Line and N. Western R.R.s
2.
3. Vet. (while in 10th grade) not enough experience (too young) applied too late.
4.
5. Either the job was filled, or not qualified.
6. I wasn't interested enough.
7.
8. Because I was involved in intercollegiate sports and that takes up alot of time.
9.
10.
11.
12.
13. There was no opening.
14. Not many places of employment in these types of jobs and not many employees needed for these jobs.
15.
16. I didn't have experience.
17.
18.
19.
20.
21. Because of my age and no experience for the job.
22. They had no openings or maybe they think I needed some experience for their kind of work.
32. When I was in EBCE I learned everything about my job that I am doing now. I think that by having experience from EBCE I got my job easier than if I didn't have any experience.
33. Training received out in the field of my choice.

56A. What specific things about the EBCE program have you found to be the most useful to you in your present job?

1. The experience of working with different types of people.
2. The experiences working in a bank through EBCE taught me the specific tasks I needed to be able to get the job I have now and enabled me to start working in a higher position and with better pay than if I had not had those experiences.
3. Relating to people and sharing a common concern or need.
4. To look in the future and reinsure myself that I won't at my work place forever.
5. Helped me to get along and associate with people and be more outspoken.
6. Working at the job site.
7. None. I need the money to go to school.
8. Nothing - I only work a part time job which I have been for almost 2 years. EBCE had nothing to do with my job.
9. If not for EBCE I would never had applied for this job and would not have it now.
10. None.
11. It gave me the background I needed for understanding the job and the experience I needed to get that job.
12. Being able to meet new people and be comfortable about it. Some experience through the program for the job I now have.
13.
14. None - because my present job has nothing to do with any of the EBCE experiences that I had.
15.
16. Getting along with people you have to work with.
17. The experiences that I received working in the different places as a cook.
18. I've learned to get along with people with different ideas, interests and personalities than mine.
19. My experience from the job sites.
20. Being in actual work conditions. Getting experience were you want it, not having someone telling you what to learn. Meeting new people. Given responsibilities.
21. The experience I had while I was in the EBCE program.
22. It helped me get a job at R.P.M. working with motorcycles and thats what I've wanted most in life is to work with cycles, but I got laid off because there wasn't enough repair work coming in in the fall.
23. None
24. I learned about law enforcement and its importance.
25. The training and experience I received during my learning at Bestt Rollr
26. Being able to get the job I did and the knowledge that this program is very good and will help alot of young people to find a career that fullfills their aspirations in life.
27.
28.
29.
30.

56B. Based on your experiences, what suggestions do you have for improving the EBCE program?

1. Inform more people about it.
2. I really can't think of any.
3. Related school-oriented subjects or program should be taken while on the job site. Arch. Tech. drafting - MPTI advanced design course.
4. Overall my EBCE experience was excellent.
5. none
6. The only thing was that you got a lot of different answers to the same questions but that was because it was a new program for everyone. The program was great!
7.
8.
9. More specific job sites. Not as general.
10.
11. If anyone wants to get into waitressing tell him or her to avoid it. It's a catchy job. Really, put more emphasis on having the student do written work that would help him or her later on.
12. Possibly a longer stay at each placement so that the student can feel more comfortable and to learn as much as possible.
13. I feel that the L.C.'s should see each person and only that person. Also more selections of job sites.
14. I heard from some people that this year there are more job sites. For instance I heard that a girl got to stay at the Milwaukee Zoo. Be able to do more on the job site. One thing that I was disatisfied with last year was when I went to Pranges to learn how to run the cash register. The people at Pranges never showed me how. All I did practically the whole day was stand around and straighten clothes on hangers.
16. more job sites available
17. None because I think EBCE has an excellent program already.
19. None. EBCE is as good as the student makes it.
21. Suggest to the students to get out and try as many different fields of work as they can while in EBCE as the field they may want to get a job in after high school may have enough people in that field already and so they do not need anyone right now for work.
22. I didn't like doing so many reports. So I would say not quite so many reports through the course. I am very happy I took the EBCE program, because it helped me understand how I should act and work on different jobs.
26. The only suggestion that I have is to expand the program so more people can get into it.
33. more sites.

63. What aspects of the EBCE program were particularly useful or helpful to you in your training program?

1. The experience of working in different situations with different people.
2. The most usful aspect was the need and pressure to complete activity sheets. That helped me discipline myself to do things I didn't want to - like study, now that I'm in school.
3. Letting me know key people to dicover what would be expected of me on the job. The place to go for a good education.
4. The ability to relate, question adults. I developed a comfortable feeling around older persons. Through the program I was able to choose a hopefully positive career direction.
5. Giving me the chance to work at WFON. Learning about the different aspects of broadcasting, and to help me decide on my career in broadcasting.
6. Working at the job sites.
7. See big operations first hand and knowing what its like to get into a factory.
8. My job site at the hospital with a Dietician. Personality tests I took to see what career corresponded to my personality best.
9. Tesch Tesch & Assoc.
10. The opportunity to choose the type of jobs to check on.
11. None that I can think of.
12. The practical experience of my own job sites was very useful plus my discussions with the employers and workers I was involved with.
14. The EBCE helped me narrow what I really wanted to do.
15. On the job training part, and the reports we made weekly.
27. Definitely the actual experiences on the job sites. The type of job I'm training for involes work with handicapped kids. My experiences in working with kids have really resulted in alot of growth on my part. Growth in maturity that I've needed during the summer following graduation and for future jobs.
28. Six weeks with the state patrol.
30. The aspect of working on our own was extremely helpful. I find it easier now to work in college and study than I believe would have been able to do without EBCE. The change of working in the small EBCE group and the large conglomecation of people at college is a fascinating thing to understand.
31. Understanding what it takes to be a pilot (the things involved in it).
33. Training in the field.

64. What more would you have liked to received from the EBCE program to better assist you in your present training program?

---

2. Other than the ability to get "A's" in all my subjects, I can't think of anything.
3. Better counseling services.
5. A course in speech and dictation, clarity.
7. More schooling on present career.
10. On the job credit towards an apprentice career. Credit for time spent working on the jbos and possibly meetings set up with apprentice boards.
11. More accounting skills or background.
12. None for myself but for the program I felt there should have been more publicity seeing that it was the first program of this type in this area.
13. I wish there would have been more sites dealing with modeling
27. Budgeting!
30. I think that more emphasis on writing well would have been important, but this pertains to me as a college student not a worker.
31. To stay longer at your chosen site.

65. What changes would you recommend be made to improve the EBCE program?

3. To audit related courses in nearby schools for a greater degree of familiarity with terms used on the "job".
5. Clarify problems of homework assignments more, and possibly have mini courses in developing speech, writing, etc.
11. To have a little more teacher than friend in other words a little more discipline-not much! Overall I thought it was a great program I even did a speech on it at the tech.
12. As mentioned before, a possibly longer stay at each site to give as much as the student can.
13. To try a little harder to have more sites.
30. I'm not sure there was very much to change from my memories. I have heard that program has become tougher than it was when I was in it, but I'm sure it is still a fine program. From the Christmas greeting card, I see the personnel is still very good. Best wishes for your continued service to us "young-ins".
31. Well, for those students going on to school. I think there should be more acedemic work to prepare them for school and for those who are going to work as soon as they get out, I think they should be able to stay at the site of their choice for a longer period of time.
33. More sites, more fields.

APPENDIX C

Item Analysis of Dissemination Workshops

ITEM ANALYSIS OF EXPERIENCE BASED CAREER EDUCATION DISSEMINATION WORKSHOP QUESTIONNAIRE

A total of 317 questionnaires were returned by participants of the EBCE dissemination workshops held throughout Wisconsin between September, 1977 and March, 1978. The questionnaire elicited opinions about the EBCE program and the information provided at the workshop. Individuals who did not respond to a given question appear as "OMIT" on the computer printout and thus account for totals of less than 100%.

Item 1. Classification of workshop participants by position:

19%	School Administrator	
32%	Counselor	
21%	Teacher	
1%	Education Researcher	
23%	Other: (i.e.)	Graduate Student
		Campus Minister
		Education Consultant - DPI
		University professor
		CETA program director
		Student Services representatives
		LVECs
		K-12 coordinator
		School psychologist
		Rehab counselor in sheltered workshop facility
		Supervisor - bilingual program
		Career education coordinator
		Work experience counselor
		Professional organization representatives:
		- State Medical Society
		- Business and Professional Women
		- Wisconsin Association for Retarded Citizens
		Personnel manager for manpower planning

Item 2. From whom did you first learn about the EBCE program?

40%	EBCE staff	
13%	EBCE printed materials	
6%	School administrators	
4%	Counselors	
4%	Teachers	
2%	NIE staff	
3%	NIE printed materials	
25%	Other: (i.e.)	Career education/career development class UW-System
		Department of Public Instruction
		National Diffusion Network
		LVEC
		Wisconsin Personnel & Guidance Association
		UW-Stout Guidance Conference
		Personal contact with EBCE staff
		CESA office

Item 3. What do you consider to be the major advantage of EBCE? [Participants asked to check no more than 3].

76%	Opportunity for career exploration
19%	Individualization
39%	Provision of an alternate form of education
3%	Helping "exceptional" students
35%	Helping students make career decisions
44%	Provision of realistic learning experiences
36%	Increasing students' motivation
3%	The interdisciplinary curriculum
1%	Other

Item 4. What do you consider to be the disadvantages of EBCE? [This was an open-ended question to which participants could generate their own statements.]

Disadvantages of EBCE were cited on 214 (68%) of the responses. The perceived disadvantages cited by workshop participants have been grouped into generic statements and are listed below. Disadvantages cited most frequently appear first.

Number of Times Cited	Percent of Responses	Disadvantages of EBCE
63	29	Rural areas and/or small communities lack adequate numbers and diversity of experience sites to serve their schools.
62	29	Staffing an EBCE program is very costly, particularly in proportion to the number of students served.
34	16	Accessibility to EBCE-type programs is not feasible for large numbers of students.
22	10	Concerns for whether EBCE conflicts with scheduling of remaining, "regular" education experiences and whether it provides an adequate academic preparation, exposure to and evaluation of academic preparation for college bound students particularly those who are college bound.
14	7	Potential competition and/or threat to traditional system and present programs such as coop and Capstone.
14	7	Administrative difficulties - transportation of students (5) - insurance and liability (1) - scheduling of single section classes (4) - limited experience with administration of such programs (4)

Number of Times Cited	Percent of Responses	Disadvantages of EBCE
13	6	Students too isolated and disassociated from school process, facilities, peers.
11	5	Lack of long-term, broad base financial support for EBCE precludes/ inhibits initiating it.
11	5	Lack of uniformity and/or control over quality of student involvement at placement sites.
7	3	EBCE promotes short range gratification of students versus long-term broad base preparation for the future.
7	3	As currently structured, EBCE comes too late in high school students' career to allow them to add classes, change program emphases, seek remedial skills, etc. as indicated by EBCE experience.
4	2	EBCE exploits students in two ways: by having them work without pay and giving so little credit for so much work.
3	1	Too much emphasis on career exploration and too little on decision making/ values/attitude/skills.
1	1	An imposition on the business community--causing them to carry the responsibilities which properly belong to the school.

Item 5. (This item solicited "Other Comments" from workshop participants.) Their comments appear below in either of two categories: (1) Statements which imply support for EBCE, and (2) those which suggest a more cautious or skeptical approach to it. Numbers to the left of each statement indicate the number of times statements of that nature were cited.

Supportive Comments

109 EBCE is an excellent program with interesting and exciting potential; it is a valuable educational alternative.

20 Requests for additional information and/or on-site visit to the EBCE program in Fond du Lac.

5 EBCE seems appropriate for many types of students--from gifted to low achiever to those with special needs.

4 EBCE should be adapted for or extended to students at the seventh or eighth grade levels and to the community for mid-career changes. Implement it as a regional concept coordinated by LVECs in CESAs.

Supportive Comments (continued)

3	Provides relevance and motivation for students.
1	Provides solution for what to do with students who graduate early.
1	Generates desirable public relations with community.

Cautious and/or Skeptical Comments

6	Structure of EBCE would need extensive revision or adaptation in order to be appropriate for small schools.
4	Uncertain or unwilling to endorse EBCE on basis of available information.
2	Scope of EBCE state-wide should be limited until more is known about its impact.
1	What evidence suggests that EBCE will create better citizens versus just making better workers?
1	More information about start-up and continuation costs of EBCE is needed.
1	EBCE is not making an adequate distinction between career education and vocational education.

CONCLUSION

The EBCE project staff itself, in conjunction with EBCE materials, appear to have been the most effective disseminators of information about the nature and purpose of the project. The concept of the project as well as the manner in which it has been presented have been enthusiastically received throughout Wisconsin.

The opportunities EBCE allows for career exploration are perceived as its single greatest strength, while its ability to provide realistic learning experiences and alternate forms of education, to increase student motivation, and to help students make career choices are also major strengths.

Uncertainty about the adaptability of EBCE programs in rural areas and concern for the high cost of staffing such a program are seen as EBCE's major drawbacks.

Experience Based Career Education Project
Fond du Lac Public School System - Year III

Project Number 502-AH-60042
(Grant Number G05-76-00213)

by

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Menomonie, Wisconsin

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EXPERIENCE BASED CAREER EDUCATION PROJECT
FOND DU LAC PUBLIC SCHOOL SYSTEM

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Summary

The purpose of the Third Party Evaluation for the third year of the Fond du Lac, Wisconsin Experience Based Career Education (EBCE) Project was to certify whether the project's objectives for 1978-79 were met and to assess the degree to which they were met.

Third party evaluation activities included assessment of the project's student-outcome objectives as well as its process objectives and their impact on the total project. Data were collected through the use of commercially published standardized tests of reading and math skills, attitudes toward work and school, career decision making, and sex role stereotyping, as well as through interviews and instruments designed by the Appalachian Educational Laboratory (AEL) or EBCE staff. Third party evaluators interviewed Control Group and EBCE students, parents, teachers, resource persons, and project staff. The third party evaluators also developed instruments to evaluate some of the objectives.

For the third consecutive year it was found that participation in EBCE had no significant negative impact on students' acquisition of reading and math skills. EBCE students made impressive gains in personal and career maturity, occupational knowledge, and ability to work compatibly with others. EBCE also had a significant impact on reducing sex role stereotyping. In addition, EBCE students developed a more positive attitude toward school and work.

Follow-up of graduates of both programs after one and two years out of school indicated that EBCE graduates speak more strongly in support of their program's effectiveness in giving them the knowledge and skills needed to meet the present demands of their lives than did graduates of the Control group.

The third party evaluators concluded that all student outcome and process objectives of the 1978-79 Fond du Lac EBCE Project have been met. The project in its third year continued to have very capable project management and dynamic administration. Staff communication and cooperation remained excellent; project personnel assumed leadership in the revision and/or redesign of EBCE materials. The project conducted effective dissemination actitivies with its personnel actively engaged in outreach and technical assistance to schools and service agencies interested in implementing EBCE in their communities. Project staff provided training and technical assistance to systems wishing to utilize the EBCE concept.

EVALUATION ACTIVITIES

By the close of the evaluation, June 30, 1979, the third party evaluators had conducted two on-site visits to the Fond du Lac EBCE project, had processed and analyzed pre- and post-test data, reviewed a sample of documents produced by the project, developed a follow-up study, assessed project dissemination activities, and reviewed learning materials.

Subjective data were obtained by on-site observation and interviews with EBCE project staff, Goodrich High School officials, experience-site resource persons, community leaders, the citizens' committee, parents, and EBCE and control-group students during on-site visits. Analysis of pre- and post-test data from commercially published tests and AEL/EBCE instruments provided information on the impacts on math and reading skills, attitudes toward work and school, career decision making, and sex role stereotyping. A copy of the instruments developed by the third party evaluators is included in Appendix A.

Pre-test data were collected at the beginning of the first semester in which a student was involved with the project, either as an EBCE student or a member of the comparison group. Matrix sampling was used to collect the data from the comparison group students. Classes were randomly selected from Goodrich High School to provide the comparison students. Instruments were randomly assigned to each class. Students in a class completed two instruments. Post-test data were collected within two weeks of the time the student exited the project. All pre- and post-tests were administered and supervised by EBCE and/or Goodrich High School staff. Test results were computer scored and analyzed at the Center for Research and Educational Improvement, University of Wisconsin-Stout, Menomonie. Test results and data analysis techniques used in the project evaluation are discussed in the next section.

Accomplishment of EBCE Student Outcome Objectives, 1978-79

1.1 EBCE students will do as well in basic academic skills as will the comparison groups of students.

The same two measures of basic skills were used in the 1978-79 evaluation as were used in the two previous years of the project. Pre-tests of the Comprehensive Test of Basic Skills (CTBS) for reading comprehension and mathematics concepts and applications were administered to the EBCE and Control groups at the beginning of their first semester of participation. Post-tests were administered during the last two weeks of the school year. The results are presented in the following paragraphs and tables.

Reading. The CTBS reading comprehension test involved students in reading paragraphs, articles, and letters. Based on the information in the written materials, students then respond to questions which measure their ability to isolate main ideas, skill in developing conclusions, and ability to recall information.

Table 1 shows a similarity between the pre-test score of Control group females and that of EBCE males. In addition there was little difference between their mean scores and those of EBCE females whose mean score was slightly higher and that of Control males whose score was lower. The means ranged from 25.8 to 30.9 on the pre-test. Statistical analysis of the pre-test scores with a two-way analysis of variance revealed that the difference between the EBCE and Control group means were not significant.

The mean for twelfth graders on national norms for the CTBS reading test is also given in Table 1. The average scores of all students except Control group males were somewhat below the national average for 1978-79 pre and post tests. Control males pre-test scores were significantly below. Their post-test scores showed a substantial increase, however, bringing them up to the national norm score. A part of this increase may have resulted from the sampling process.

Table 1. Pre- and Post-Test Results for 1978-79
CTBS Reading Test

Group	Pre-Test			Post-Test			Net Change
	$\overline{X}$	SD	N	$\overline{X}$	SD	N	
EBCE-Females	30.9	6.5	31	29.3	6.6	30	-1.7
Control-Females	27.8	7.7	31	30.5	10.8	6	2.7
EBCE-Males	27.2	7.5	27	27.9	7.9	25	0.7
Control-Males	25.8	6.3	17	32.5	8.7	39	6.7

National Norms for grade 12: Mean ($\overline{X}$) = 32.0

$\overline{X}$ = Mean Score
SD = Standard Deviation
N = Number

Table 2. Pre- and Post-Test Results for 1978-79
CTBS Math Test

Group	Pre-Test			Post-Test			Net Change
	$\overline{X}$	SD	N	$\overline{X}$	SD	N	
EBCE-Females	34.3	9.5	32	31.6	8.8	30	-2.7
Control-Females	42.7	6.6	27	36.7	8.8	25	-6.0
EBCE-Males	35.4	8.0	26	32.7	8.4	25	-2.7
Control-Males	43.7	6.0	26	37.6	12.1	21	-6.1

National Norms for grade 12: Mean ($\overline{X}$) = 34.0

EBCE ended the year slightly below the National Mean while the Control group was slightly above.

$\overline{X}$ = Mean Score
SD = Standard Deviation
N = Number

The post-test means of Control females, on the other hand, showed only a slight growth in reading scores while the EBCE males showed little change and EBCE females showed a slight decrease in post-test score. The final column of Table 1 shows the net change in mean reading scores between pre- and post-test. An analysis of variance revealed no significant difference between the Control and EBCE groups. (See Appendix B for the analysis of variance results.)

The third party evaluators concluded that EBCE participation has had no significant negative impact on reading skills.

Mathematics. The CTBS mathematics applications and concepts test measures the student's ability to apply appropriate mathematics concepts or techniques to problems given in the test. Students work problems presented in the test and select the correct answer from a list of answers given. The items are in a multiple choice format.

The results of the mathematics pre- and post-tests are given in Table 2. Scores within each treatment group were consistent but there was considerable difference between the EBCE and Control groups. EBCE scores were at the national mean while Control groups were considerably above. An analysis of variance revealed a statistically significant difference among pre-test means. The Control group mean was higher.

The difference among groups and sex was less marked at the post-test level than at the pre-test level. The scores of all students declined somewhat uniformly within treatment groups, although the Control group experienced a greater decline in performance than did the EBCE males and females. An analysis of variance run on the post-test mean scores indicated that Control group mean was significantly higher. However, since the difference in these means had decreased by more than 3 points between the pre- and post-tests it was the conclusion of the third party evaluators that participation in the EBCE program had no significant impact on the acquisition of math skills.

This objective has been met.

1.2 EBCE students will acquire greater career knowledge than will the comparison groups of students.

EBCE and Control group students completed an End-of Year Student Opinionnaire developed by the Center for Vocational, Technical and Adult Education, University of Wisconsin-Stout. The questionnaire focused on assessment of the adequacy of career information gained in their respective educational programs in 1978-79. Copies of the EBCE instrument and the parallel Goodrich High School form are included in Appendix A.

Overall mean scores for the instrument are given on Table 3. Responses of males and females within each group were highly consistent, suggesting that the program rather than one's gender was the factor in gaining greater career knowledge. As a group, EBCE students showed far greater satisfaction with the career information they received than did Control group students.

Mean scores for specific questionnaire items are shown on Table 4. EBCE students consistently gave responses ranging from agreement to strong agreement about the value of their EBCE participation in giving them career knowledge (Items 1, 13, 14); self-insight (Items 2, 3, 4), decision-making skills (Item 15); job seeking skills (Items 5, 18); ability to see relationships between school and work (Item 16); and knowledge of educational opportunities (Item 19).

Control group students, on the other hand, were either consistently undecided about the value of their traditional in-school program or expressed disagreement to positively worded statements about its value. They gave the lowest ratings to Items 2, 6, 8, and 9 which deal with how helpful their program was in making a career choice, getting specific skills that can be used on the job, or helping one understand how business and industry operate in general and in the Fond du Lac area.

Table 3. End-of-year Student Opinionnaire, 1978-79

Group	Mean Score	Standard Deviation	Number
EBCE Males	82.63	7.76	24
EBCE Females	82.03	12.31	31
Control Males	59.57	10.30	21
Control Females	59.80	10.42	25

Male and female responses within each group were highly consistent, suggesting that the program rather than one's gender was the factor in gaining greater career knowledge.

The higher mean scores for EBCE students reflect their opinion that EBCE provided more career knowledge, decision making and coping skills.

TABLE 4. Individual Items on End-of-Year Student Opinionnaire 1978-79

STATEMENT	EBCE N = 55						Control N = 46					
	Total		Males=24		Females=31		Total		Males=21		Females=25	
	X̄	SD	X̄	SD	X̄	SD	X̄	SD	X̄	SD	X̄	SD
• The EBCE Goodrich High School program:												
1. Gave me knowledge about kinds of careers.	4.6	0.6	4.6	0.6	4.7	0.6	3.2	1.1	3.1	1.2	3.2	1.1
2. Enabled me to make an almost certain career choice.	4.2	0.8	4.0	0.9	4.4	0.6	2.5	1.2	2.7	1.2	2.4	1.2
3. Gave me a great deal of knowledge about my own interests and abilities.	4.5	0.6	4.5	0.6	4.5	0.6	2.9	1.1	2.8	1.1	3.0	1.1
4. Helped me match my interests and/or abilities to a career.	4.4	0.6	4.4	0.7	4.5	0.6	3.5	1.2	3.5	1.2	3.6	1.2
5. Showed me how to use sources of job information, locate jobs, apply and interview, etc.	4.5	0.5	4.5	0.5	4.5	0.6	3.5	1.2	3.5	1.2	3.6	1.2
6. Gave me specific skills I can use on the job.	4.3	0.7	4.3	0.3	4.3	0.6	2.3	0.9	2.3	0.9	2.3	0.9
7. Helped me show the relationship between math, science, and English and tasks done on the job.	3.9	0.8	3.9	0.9	3.9	0.7	3.0	1.0	3.3	0.9	3.8	1.1

Key to Rating Scale
5 = Strongly Agree
4 = Agree
3 = Undecided
2 = Disagree
1 = Strongly Disagree

X̄ = Mean Score
SD = Standard Deviation
N = Number

TABLE 4. Individual Items on End-of-Year Student Opinionnaire 1978-79
(Continued)

STATEMENT	EBCE N = 55						Control N = 46					
	Total		Males=24		Females=31		Total		Males=21		Females=25	
	X̄	SD	X̄	SD	X̄	SD	X̄	SD	X̄	SD	X̄	SD
8. Gave me a better understanding of how business and industry operate.	4.3	0.7	4.3	0.5	4.2	0.8	2.3	0.7	2.3	0.7	2.2	0.8
9. Gave me a better understanding of the contribution business and industry make to Fond du Lac.	4.2	0.6	4.3	0.6	4.2	0.6	2.4	0.9	2.4	0.7	2.5	1.0
11. Did an adequate job of meeting meeting my academic needs.	4.3	0.5	4.4	0.5	4.3	0.5	4.1	0.8	4.0	0.7	4.2	0.9
13. Did an adequate job of meeting my career education needs.	4.5	0.6	4.4	0.7	4.6	0.6	3.6	0.9	3.5	0.5	3.7	1.1
14. Had very useful career information/learning materials.	4.4	0.6	4.5	0.5	4.4	0.6	3.0	1.0	2.9	1.1	3.2	0.9
15. Influenced my career choice more than my paid work experiences will	4.6	0.6	4.5	0.6	4.6	0.6	2.9	1.1	3.1	1.0	2.8	1.2
16. Helped me see how class assignments apply to jobs/work.	4.2	0.7	4.1	0.6	4.2	0.8	3.4	1.1	3.5	1.1	3.4	1.0
18. Will help me in finding a job.	4.6	0.6	4.6	0.5	4.6	0.7	3.1	1.1	3.2	1.1	3.0	1.1
19. Provided ample information on post-secondary educational opportunities.	4.2	0.7	4.2	0.7	4.2	0.7	3.5	1.2	3.6	1.3	3.5	1.1

It could be predicated that EBCE students would assign higher ratings to career related questions that was the central focus of the EBCE program. However, they also gave a higher rating than Control group students to Item 11 on Table 3. The item deals with their program's adequacy in meeting their academic needs.

Interviews with randomly selected groups of EBCE and Control group students showed both groups to have a substantial amount of knowledge about careers and job seeking skills. EBCE students were judged superior, however, based on their ability to relate numerous concrete experiences in contrast to the Control group's many untested ideas about what is involved in a variety of work experiences. EBCE students had the added advantage of contact with on-site resource persons as sources of career information. Thirty-five percent of the 144 resource persons who responded to the survey reported in Objective 1.8 said they talked frequently about job opportunities with EBCE students, while another 58% said they did so occasionally.

Third party evaluators concluded tht this objective was achieved.

1.3 EBCE students will acquire greater career maturity than will the comparison groups of students.

A Work Opinionnaire developed by the Center for Vocational, Technical and Adult Education at the University of Wisconsin-Stout was used to measure attainment of career maturity as evidenced by realistic and positive attitudes toward work. The instrument is included in Appendix A. Interviews and the end of the year opinionnaire discussed in the previous section also provide data for this objective.

The work opinionnaire was administered as a pre-and post-test to the EBCE and Control groups. Results are given on Table 5. Mean scores of all students fall within the positive work attitude range on both sides. Control group males and EBCE students' attitudes remained virtually unchanged between testing while the mean score of Control group females declined slightly. The decline was not statistically significant, however. (See appendix B for the analysis of variance results.)

Most items on Table 4 in the Objective 1.2 section do suggest that EBCE students have acquired greater career maturity in addition to greater career knowledge.

Interviews with a sample of students in both groups led third party evaluators to conclude that EBCE students had a clearer sense of what they wanted or did not want to do and had a clearer conception of the variety and nature of jobs in the world of work.

The third party evaluators concluded that this objective had been met.

Table 5. Pre- and Post-test Mean Scores for Work Opinionnaire, 1978-79

Group	Pre-test			Post-test			Net Change
	$\bar{X}$	SD	N	$\bar{X}$	SD	N	
EBCE Females	93.3	7.4	31	93.6	8.1	30	0.3
Control Females	96.5	7.5	28	93.4	7.1	26	-3.1
EBCE Males	90.6	13.2	28	90.5	8.9	26	-0.1
Control Males	91.6	8.9	26	90.7	7.8	22	-0.9

Key to Scores:

24 to 43 = Very Negative
44 to 62 = Negative
63 to 81 = Neutral/Undecided
82 to 101 = Positive
102 to 120 = Very Positive

$\bar{X}$ = Mean Score
SD = Standard Deviation
N = Number

1.4 EBCE students will develop more positive attitudes toward learning environments, themselves, others, and work than will the comparison group students.

The Student Attitude Survey developed by Research For Better Schools, Inc. measures students' attitudes toward their school program, instructional materials, and school facilities. It also assesses their self concept, attitude toward others, and feelings toward work.

The results of the pre- and post-tests on the Student Attitude Survey are given in Table 6.

Females in both groups had similar, high pre-test scores. EBCE males pre-test scores were slightly lower while Control males had the lowest attitude scores. Females' pre-test scores for both groups were in the positive range while those of males were more neutral or mixed. On the post-test all of the means were well within the positive range, indicating that attitudes of all students had become more positive during the school year. The Net Change column on Table 6 shows the amount of positive change that occured. EBCE females had the largest change.

The End-of-Year Student Opinionnaire discussed in Objective 1.2 (the individual items of which are shown on Table 4) also documents the positive attitude EBCE students have about their learning environment, self, and others. These data, coupled with that from the Student Attitude Survey and interviews with 12 randomly selected students from each group led third party evaluators to conclude that Objective 1.4 was met.

Table 6. EBCE and Control Group Attitudes Toward School, Self and Others as Measured by the Student Attitude Survey, 1978-79

Group	Pre-test			Post-test			Net Change
	$\overline{X}$	SD	N	$\overline{X}$	SD	N	
EBCE Females	289.2	23.5	32	324.4	22.8	29	35.2
Control Females	282.8	25.4	27	302.6	32.5	25	19.8
EBCE Males	275.4	29.8	31	302.5	28.7	24	27.1
Control Males	267.8	33.0	18	294.14	40.8	21	26.6

Key to Scores:

- Scores between 280 and 360 are in the positive range on the scale.
- Scores between 200 and 280 are in the undecided and/or mixed attitude range.

$\overline{X}$ = Mean Score
SD = Standard Deviation
N = Number

1.5 EBCE students will exhibit less sex-role stereotyping than will the comparison groups of students.

The Career Questionnaire developed by the Center for Vocational, Technical and Adult Education at the University of Wisconsin-Stout was used to measure sex stereotypes associated with various jobs and worker traits. A copy of the Career Questionnaire is included in Appendix A. The questionnaire asked students to respond to a list of worker characteristics and occupations and to indicate on a rating scale whether a particular item was more male than female, either male or female, or more female than male.

The scoring key for the instrument was designed to produce high scores to indicate a female bias, moderate scores to indicate an unbiased view, and low scores to indicate a male bias. Scores between 120 and 156 indicate an unbiased view of the traits and jobs listed. Scores lower than 120 indicate a male bias while scores above 156 indicate a female bias.

Pre- and post-tests data for EBCE and Control groups are presented on Table 7. Pre-test scores for all groups showed an overall male bias toward the characteristics and jobs listed. Males of both groups had a slightly greater male bias than did their female counterparts. Post-test scores revealed that the scores of all were still within the male-bias range although three of the four groups had become less male biased. The post-test score of Control females showed a greater male bias than at the start of the school year. This score is viewed as somewhat unrealiable, however, based on the small number of Control females (only seven) who completed the post-test.

A breakdown of how specific traits and occupations were perceived by the groups on pre- and post-tests is shown on Tables 8 through 13. Scores for all questionnaire items ranged from one to five based on the following rating scale: (1) Male; (2) More Male than Female: (3) Either Male or Female; (4) More Female than Male; (5) Female. Based on these ratings, each item was tabulated

Table 7. Sex Stereotypes Associated with Jobs and Worker Traits as Measured by Career Questionnaire, 1978-79.

Group	Pre-test			Post-Test			Net Change
	$\overline{X}$	SD	N	$\overline{X}$	SD	N	
EBCE Females	115.5	10.7	30	118.9	9.9	30	3.4
Control Females	115.8	9.9	16	106.3	19.4	7	-9.5
EBCE Males	107.6	11.7	28	116.3	10.6	25	8.7
Control Males	105.3	13.3	28	113.7	12.1	38	8.4

Key to Scores:

- Scores lower than 120 indicate a male bias
- Scores between 120 and 156 indicate an unbiased view
- Scores above 156 indicate a female bias.

$\overline{X}$ = Mean Score

SD = Standard Deviation

N = Number

into three categories: those with mean scores ranging from 1 to 2.49 were interpreted as more male than female; scores of 2.50 to 3.50 were interpreted as either male or female; and scores of 3.51 to 5.00 as more female than male. Tables 8 through 10 show the worker characteristics for the three categories, while Tables 11 through 13 show the occupations within the three categories.

On the pre-test there was no significant difference between the mean scores for the EBCE and Control group students. Both sets of scores displayed a male bias. At the end of the school year the EBCE students had a significantly less biased view of occupations. However, this difference must be interpreted carefully since the control group of females was small and had the lowest mean score.

A rotational design was used to assess the impact of the EBCE experience on students who participated in the program for one semester. Those entering second semester formed the control group for those who were enrolled during semester one. The second semester group became an experimental group for semester two. Each group became less stereotyped during their EBCE experience. The difference between the semester one and its control group, those entering semester two, approached significance. The difference between the post-test score for the semester two group and the semester one group was significant when analyzed with analysis of covariance. See Appendix A for the COVAS. It was the judgment of the third party evaluators that the EBCE experience had a significant impact on reducing sex role stereotyping.

Table 8. Worker Characteristics Viewed as More Male than Female* on Career Questionnaire 1978-79

Characteristic	EBCE				Control			
	Male		Female		Male		Female	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Ability to:								
3. Sell or Convince	o	o	o	o	o	o	o	x
5. Work with hands	o	o	o	o	o	x	o	x
7. Willing to travel	x	o	o	o	x	o	o	x
8. Work with numbers	o	o	o	o	o	o	o	x
10. Lift heavy objects	x	x	x	x	x	x	x	x
12. Do mechanical tasks	x	x	x	o	x	x	x	x
13. Do outside work	x	o	o	o	x	x	o	x
18. Take control of a situation	x	o	o	o	x	o	o	o
19. Do work that gets hands dirty	x	x	x	o	x	x	x	x
22. Be inventive	o	o	o	o	o	o	o	x
Total number of characteristics reported as more male than female	6	3	3	1	6	5	3	9

*Based on group mean score of 1.00 to 2.49

Key:
x = scores between 1.00 & 2.49
0 = score not between 1.00 & 2.49

EBCE males and females made significant gains in viewing given worker characteristics in a less male-biased way.

Table 9. Worker Characteristics Viewed as Either Male or Female* on Career Questionnnaire, 1978-79

Characteristic	EBCE				Control			
	Male		Female		Male		Female	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Ability to:								
1. Organize	x	x	x	x	x	x	x	o
2. Plan	x	x	x	x	x	x	x	o
3. Sell or convince	x	x	x	x	x	x	x	o
4. Communicate effectively	x	x	x	x	x	x	x	x
5. Work with hands	x	x	x	x	x	o	x	o
6. Do the same task over and over	x	x	x	x	x	x	x	x
7. Be willing to travel	o	x	x	x	o	x	x	o
8. Work with numbers	x	x	x	x	x	x	x	o
9. Do clerical tasks	o	x	o	o	o	o	o	o
11. Work with people	x	x	x	x	x	o	x	x
13. Do outside work	o	x	x	x	o	o	x	o
14. Be aware of others' feelings	o	x	o	o	o	o	o	o
15. Be neat in habits	o	x	o	o	o	x	o	o
16. Accept responsibility	x	x	x	x	x	x	x	x
17. Be good with children	o	x	o	x	o	o	o	o
18. Take control of a situation	o	x	x	x	o	x	x	x
19. Do work that gets hands dirty	o	o	o	x	o	o	o	o

Table 9. Worker Characteristics Viewed as Either Male or Female* on Career Questionnaire, 1978-79 (continued)

Characteristic	EBCE Male Pre	EBCE Male Post	EBCE Female Pre	EBCE Female Post	Control Male Pre	Control Male Post	Control Female Pre	Control Female Post
20. Learn skills quickly	x	x	x	x	x	x	x	x
21. Solve problems	x	x	x	x	x	x	x	x
22. Be inventive	x	x	x	x	x	x	x	o
Total Number of characteristics reported as either male or female	12	19	15	17	12	13	15	7

*Based on group mean of 2.50 to 3.50

Key to scores:

x = Score between 2.50 & 3.50

o = Mean score not between 2.50 & 3.50

An increase in the number of unbiased characteristics listed in the post-test column is evidence of growth toward a sex-bias-free attitude toward worker characteristics.

Table 10. Worker Characteristics Viewed as More Female than Male* on Career Questionnaire 1978-79

Characteristic	EBCE Male Pre	EBCE Male Post	EBCE Female Pre	EBCE Female Post	Control Male Pre	Control Male Post	Control Female Pre	Control Female Post
Ability to:								
1. Organize	o	o	o	o	o	o	o	x
2. Plan	o	o	o	o	o	o	o	x
9. Do clerical tasks	x	o	x	x	x	x	x	x
14. Be aware of others' feelings	x	o	x	x	x	x	x	x
15. Be neat in habits	x	o	x	x	x	o	x	x
17. Be good with children	x	o	x	o	x	x	x	x
Total number of characteristics reported as More Female than Male	4	0	4	3	4	3	4	6

*Based on group mean score of 3.51 to 5.00

Key to Score:

x = Score between 3.51 and 5.00

o = Score not between 3.51 & 5.00

EBCE males made significant progress in viewing such characteristics as sensitivity, neatness, and working with children as traits that are no longer the exclusive domains of females.

Table 11. Occupations Viewed as More Male than Female* on Career Questionnaire 1978-79

Occupation	EBCE				Control			
	Male		Female		Male		Female	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
23. Factory worker	x	x	x	x	x	x	x	x
24. Military officer	x	x	x	x	x	x	x	x
25. Radio repair worker	x	x	x	x	x	x	x	x
26. Doctor	x	x	x	o	x	o	o	x
30. Business owner/ operator	x	o	o	o	x	o	x	x
31. Lawyer	x	o	x	x	x	x	o	x
33. Scientist	x	o	x	x	x	o	o	x
34. Fire fighter	x	x	x	x	x	x	x	x
36. Train engineer	x	x	x	x	x	x	x	x
39. Police officer	x	x	x	x	x	x	x	x
41. Judge	x	x	x	x	x	x	x	x
43. Electrician	x	x	x	x	x	x	x	x
44. Landscaper	x	x	x	x	x	x	x	x
45. Senator	x	x	x	x	x	x	o	x
46. Custodian	x	o	x	x	x	x	x	x
Total number of occupations seen as more male than female	15	11	14	13	15	12	11	15

*Based on group mean score of 1.00 to 2.49

Key: x = Score between 1.00 and 2.49

o = Score not between 1.00 & 2.49

A decline between pre- and post-testing in the number of occupations perceived as mainly for males suggests a reduction in sex bias. Students in all groups continue to view more occupations as male than is warranted by the requirements of those jobs.

TABLE 12. Occupations Viewed as Either Male or Female* on Career Questionnaire 1978-79

Occupation	EBCE				Control			
	Male		Female		Male		Female	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
26. Doctor	o	o	o	x	o	x	x	o
28. Dental Technician	x	x	x	x	x	x	x	x
30. Business owner/ operator	o	x	x	x	o	x	o	o
31. Lawyer	o	x	o	o	o	o	x	o
32. Cook	x	x	x	x	x	x	x	o
33. Scientist	o	x	o	o	o	x	x	o
37. News reporter	x	x	x	x	x	x	x	x
38. Veterinarian	x	x	x	x	x	x	x	x
40. Teacher	x	x	x	x	x	x	x	x
42. Writer	x	x	x	x	x	x	x	x
45. Senator	o	o	o	o	o	o	x	o
46. Custodian	o	x	o	o	o	o	o	o
Total number of occupations seen as either male or female	6	10	7	8	6	9	10	5

*Based on group mean score of 2.50 to 3.50

Key: x = Score between 2.50 & 3.50

o = Score not between 2.50 & 3.50

An increase in the number of occupations viewed as either male or female suggests reduced sex bias in the way jobs are perceived. Males in both groups show the greatest progress.

Table 13. Occupations Viewed as More Female than Male* on Career Questionnaire, 1978-79

Occupation	EBCE				Control			
	Male		Female		Male		Female	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
27. Teacher Aide	x	x	x	x	x	x	x	x
29. Secretary	x	x	x	x	x	x	x	x
35. Nurse	x	x	x	x	x	x	x	x
Total number of occupations reported as more female than male.	3	3	3	3	3	3	3	3

*Based on group mean score of 3.51 to 5.00

Key: x = Score between 3.51 & 5.00

o = Score not between 3.51 & 5.00

No change occurred among males or females in either group with respect to the number or nature of occupations viewed as more female than male.

1.6 A follow-up on graduates of EBCE program will reveal positive attitudes toward learning environments if they are enrolled in post-secondary educational programs, and job satisfaction if they are employed.

A follow-up survey for 1977 and 1978 EBCE and Control Group graduates was developed by the Center for Vocational, Technical and Adult Education at the University of Wisconsin-Stout. Copies of the parallel forms used by the two groups are included in Appendix A.

Follow-up forms were sent to all EBCE participants of the 1977 and 1978 programs whether they had participated for one semester or two. The number of actual participants in the EBCE program was relatively small, but a higher response rate was anticipated from them because of the highly personalized nature of the program. A considerably greater number of Control group graduates were contacted to compensate for this factor.

The Control group to whom the follow-up surveys were sent consisted of 150 non-EBCE participants whose names were randomly selected from the Goodrich High School roster of 1977 graduates and another 150 chosen from among 1978 graduates.

Follow-up surveys to Control group graduates had a cover-letter signed by Jerry Henning, director of the Goodrich High School Counseling Center, while cover-letters to EBCE graduates were signed by EBCE project director Ron Nelson. The graduate's name and address were listed on the survey instrument each received. A postage-paid return envelope, pre-addressed to the appropriate school, was also included. Only one survey

TABLE 14

Respondents by Year of Graduation

Item 2 *Year graduated*	EBCE N = 85					Goodrich N = 76				
	Total	Females		Males		Total	Females		Males	
	N	n	%	n	%	N	n	%	n	%
1977	35	15	35	20	48	36	16	39	20	57
1978	46	26	60	20	48	40	25	61	15	43
1979	2	1	2	1	2	0	0	0	0	0
Left district or dropped out	2	1	2	1	2	0	0	0	0	0
Total	85	43		42		76	41		35	

Table 15. Profile of 1977 and 1978 EBCE Graduates

Statement from Follow-Up Survey Items	EBCE Graduates N=85					
	Total Total N=85		Females N=43		Males N=42	
	N	%	N	%	N	%
• *Year/grade level of participation in EBCE (Item 3)*						
Junior year	2	2	1	2	1	2
Senior year	83	98	42	98	41	98
• *Semesters spent in EBCE (Item 4)*						
One semester	50	59	24	56	26	62
Two semesters	35	41	19	44	16	38
• *Adequacy of length of time in EBCE program (Item 5)*						
Too short	34	40	15	35	19	45
Just right	46	54	25	58	21	50
Too long	4	5	2	5	2	5
• *Employment at an EBCE work site since graduation (Item 6)*						
Have worked at an EBCE site since graduation	28	33	12	28	16	38
Have not worked at EBCE site since graduation	57	67	31	72	26	62
• *Planning for a career related to an EBCE experience (Item 12)*						
Yes	48	56	23	53	25	60
No	28	33	14	33	14	33
Omit	9	11	6	14	3	7

TABLE 16

Current Employment Status of EBCE and Goodrich
One and Two-Year Graduates

Item 7. *I am presently:*	EBCE N = 85						Goodrich N = 76					
	Total		Females		Males		Total		Females		Males	
	N	%	n	%	n	%	N	%	n	%	n	%
1. Employed full time in a paid non-military occupation.	43	51	19	44	24	57	25	33	8	20	17	49
2. Employed full time in the military service.	3	4	1	2	2	5	3	4	2	5	1	3
3. Employed part time -- not in school	7	8	5	12	2	5	5	7	4	10	1	3
4. Employed part time while in school	18	21	11	26	7	17	27	36	16	39	11	31
5. Full time student -- not employed part time.	10	12	4	9	6	14	14	18	9	22	5	14
6. Full time homemaker -- not looking for paid employment.	1	1	1	2	0	0	1	1	1	2	0	0
7. Full time homemaker -- looking for paid employment.	1	1	1	2	0	0	0	0	0	0	0	0
8. Unemployed but looking for paid employment	0	0	0	0	0	0	0	0	0	0	0	0
9. Unemployed -- not looking for paid employment	0	0	0	0	0	0	0	0	0	0	0	0
10. Work full time -- go to school part time.	2	2	1	2	1	2	1	1	1	2	0	0
Total	85		43		42		76		41		35	

TABLE 17

Average Hourly Wage of Employed Graduates

Item 9. *Present hourly wage before deductions:*	EBCE N = 85						Goodrich N = 76					
	Total		Females		Males		Total		Females		Males	
	N	%	n	%	n	%	N	%	n	%	n	%
1. Under $2.00 per hour	1	1	1	2	0	0	1	1	1	2	0	0
2. $2.00 to $2.99 per hour.	11	13	8	19	3	7	11	14	8	20	3	9
3. $3.00 to $3.99 per hour.	33	39	21	49	12	29	27	36	16	39	11	31
4. $4.00 to $4.99 per hour.	14	16	4	9	10	24	8	11	2	5	6	17
5. $5.00 to $5.99 per hour.	7	8	0	0	7	17	5	7	1	2	4	11
6. $6.00 to $6.99 per hour.	2	2	1	2	1	2	1	1	0	0	1	3
7. $7.00 to $7.99 per hour.	1	1	0	0	1	2	2	3	0	0	2	6
8. Over $8.00 per hour.	0	0	0	0	0	0	0	0	0	0	0	0
Omits	16	19	8	19	8	19	21	28	13	32	8	23
Total	85		43		42		76		41		35	

round was conducted--no attempt was made to contact those who did not respond to the initial mailing.

The actual response rate for EBCE graduates was 64 percent based on 132 mailed survey forms and 85 returned. The Control group graduates' response rate was 25 percent, based on 300 mailed forms and 76 returned. A breakdown of the responses of both groups by year of graduation is shown on Table 14.

Table 15 presents data on EBCE graduates only. The table deals with the year or grade level during which they were in EBCE, for how long, the adequacy of that time in the program, employment in EBCE work sites since graduation, and plans for a career related to a specific job experienced while in EBCE. Most EBCE respondents participated during their senior year, for only one semester, and felt that length of time to be just right or too short. Only one-third has worked at at EBCE site since graduation but more than half are planning for a career related to an EBCE site experience.

Table 16 shows current employment data for all graduates. About half of the males in both groups are employed full time in a paid civilian occupation while more than twice as many EBCE females as Control females are so employed. On the other hand, a greater percentage of Control students are in school though many are also working part-time.

Table 17 reports the average hourly wage of employed graduates for both programs. About one-third of each group reported earnings of $3.00 to $3.99 per hour, with the other largest categories clustered on either side of that amount. Earnings of $5.00 per hour and above were reported primarily by males of both groups.

Table 18 shows the mean hourly wage by group and sex. EBCE and Control group males show the same mean hourly wage--nearly $4.00 per hour. Earnings of females of both groups were also very similar--just under $3.00 per hour--although EBCE females report earnings slightly more than their Control group counterparts. Earnings of males in both groups was about one dollar more per hour than that reported by females.

Graduates of both groups reported similar numbers of jobs from different employers since graduation. This information is shown on Table 19. Nearly 70% of the EBCE graduates and 80% of the Control group graduates reported having had only one or two jobs. More females than males in each group reported having had three or four jobs.

Item 11 on the Graduate Follow-Up Survey elicited information about further training graduates may have taken since leaving high school. Their responses are shown on Table 20. A slightly higher percentage of Control group graduates reported having taken further training in all of the five categories of training or education beyond high school which were listed. About the same percentage--nearly 30%--in each group reported taking no further training. More EBCE graduates reported "other" types of pursuits, however, including individual courses, one semester enrollments, and training in the milirary.

Graduates' perceptions of how helpful the EBCE/Control program had been in preparing them for or making them aware of thirteen career related factors are listed on Table 21. The ratings represented a continuum ranging from No Help (1) to Some Help (3) to A Great Deal of Help (5). Mean scores of males and females within each treatment group were highly consistent, again suggesting that the program--EBCE or Control--rather than one's gender was the basis for graduates' responses.

Table 18. Mean Hourly Wage Before Deductions Reported by 1977 and 1978 Graduates

Group	Mean	Standard Deviation	Number
EBCE group	3.4#	1.1	85
Control group	3.3	1.2	76
EBCE females	2.9	0.9	43
Control females	2.8	0.8	41
EBCE males	3.8	1.1	42
Control males	3.8	1.4	35

#KEY to Mean Score:

(1) Under $2.00 per hour
(2) $2.00 to $2.99 per hour
(3) $3.00 to $3.99 per hour
(4) $4.00 to $4.99 per hour
(5) $5.00 to $5.99 per hour
(6) $6.00 to $6.99 per hour
(7) $7.00 to $7.99 per hour
(8) Over $8.00 per hour

TABLE 19

Number of Employers at Either Full Time or Part Time Jobs Since High School Graduation

Item 10 *Number of Employers/Jobs*	EBCE N = 85						Goodrich N = 76					
	Total		Females		Males		Total		Females		Males	
	N	%	n	%	n	%	N	%	n	%	n	%
1. None	8	9	7	16	1	2	6	8	5	12	1	3
2. 1 or 2	58	68	26	60	32	76	59	78	30	73	29	83
3. 3 or 4	12	14	7	16	5	12	10	13	6	15	4	11
4. 5 or 6	4	5	1	2	3	7	1	1	0	0	1	3
5. 7 or more	1	1	1	2	0	0	0	0	0	0	0	0
Omit	2	2	1	2	1	2	0	0	0	0	0	0
Total	85		43		42		76		41		35	

TABLE 20

Further Training Taken by 1977 and 1978 Graduates Since High School Graduateion

Item 11. *Further training taken in:* *	EBCE N = 85						Goodrich N = 76					
	Total		Female n=43		Male n=42		Total		Female n=41		Male n=35	
	N	%	n	%	n	%	N	%	n	%	n	%
1. A vocational school one-year diploma program.	7	8	4	9	3	7	8	11	5	12	3	9
2. A vocational school two-year associate degree program	13	15	3	7	10	24	14	18	6	15	8	23
3. A four-year university program	13	15	9	21	4	10	22	29	13	32	9	26
4. An apprenticeship program.	1	1	0	0	1	2	2	3	0	0	2	6
5. An in-service or on-the-job training program.	5	6	2	5	3	7	5	7	3	7	2	6
6. I have not taken any further training	25	29	14	33	11	26	21	28	12	29	9	26
7. Other.	11	13	2	5	9	21	5	7	4	10	1	3
Omit	12	14	9	21	3	7	4	5	2	5	2	6
Total *	87		43		44		81		45		36	

* Respondents were instructed to check all statements that applied to them, thus, some totals exceed actual number of survey respondents.

TABLE 21

Perceived Helpfulness of 1977 and 1978 Graduates' Educational Program

Items 13-25. *Helpfulness in preparing for or becoming aware of:*	EBCE N = 85						Goodrich N = 76					
	Total		Females		Males		Total		Females		Males	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
13. New (emerging) occupations	3.8	1.0	3.8	0.8	3.8	1.1	2.7	1.1	2.6	1.2	2.8	1.0
14. What future employers or educators will expect of me.	4.1	1.0	4.1	1.0	4.2	0.9	3.3	1.0	3.3	1.0	3.4	1.1
15. Traditionally male jobs which females now enter.	3.4	1.0	3.4	1.0	3.4	1.0	2.4	1.0	2.5	1.1	2.2	0.9
16. Traditionally female jobs which males now enter.	3.3	1.1	3.3	1.1	3.3	1.1	2.1	0.9	2.2	0.9	2.1	1.0
17. My own feelings about entering a job field, traditionally held by persons of the opposite sex.	3.4	1.1	3.4	1.1	3.3	1.1	2.2	1.1	2.4	1.2	2.0	1.0
18. Occupations which have many job opportunities.	4.1	0.9	4.1	0.9	4.1	1.0	3.3	1.2	3.1	1.3	3.5	1.1
19. Occupations which are overcrowded with workers and job applicants. . . .	3.7	1.0	3.6	1.0	3.8	0.9	3.0	1.2	3.1	1.4	3.0	1.0
20. Educational opportunities after high school.	4.1	1.0	4.0	1.0	4.2	1.0	3.7	1.2	3.7	1.2	3.7	1.2
21. How much training is needed to pursue my career goal and where to go to get it.	4.2	0.9	4.2	1.0	4.3	0.9	3.4	1.2	3.4	1.2	3.4	1.1
22. Work and career opportunities available in the Fond du Lac area	4.0	0.9	4.1	1.0	3.9	0.9	2.8	1.2	2.7	1.1	2.8	1.2

- Continued -

Table 21 - Continued

- 2 -

Items 13-25. *Helpfulness in preparing for or becoming aware of:*	EBCE N = 85						Goodrich N = 76					
	Total		Females		Males		Total		Females		Males	
	$\overline{X}$	SD	$\overline{X}$	SD	$\overline{X}$	SD	$\overline{X}$	SD	$\overline{X}$	SD	$\overline{X}$	SD
23. Education and training opportunities in the Fond du Lac area.	3.9	1.0	3.8	1.0	4.0	1.0	3.2	1.2	3.0	1.3	3.4	1.0
24. Jobs and types of careers related to my own career goal.	4.1	1.0	4.0	1.0	4.1	1.0	3.0	1.2	3.0	1.2	3.1	1.3
25. How choice of occupation may affect my life styles -- where I live, amount of free time, friends and fellow workers, etc.	4.1	1.1	4.0	0.9	4.3	0.9	2.7	1.2	2.7	1.3	2.7	1.0
Total	85		43		42		76		41		35	

Rating Scale (key to $\overline{X}$ = Mean Score)

Great Deal		Some		None
5	4	3	2	1

SD = Standard Deviation:

0 to .60 = Very High Level of Agreement
.61 to 1.20 = High Level of Agreement
1.21 to 1.80 = Moderate Level of Agreement
1.81 & above = Low Level of Agreement

EBCE graduates consistently gave their program higher, more positive ratings than did the Control group graduates in Table 21. EBCE responses suggested that their program had been of considerable help in the career related factors while the Control group's responses more often said some help or less. An exception was Item 20: Preparing for Educational Opportunities After High School, which Control group graduates reported as quite helpful.

Table 22 reports graduates' perceptions of the helpfulness of the program in which they participated in providing or improving specific academic or vocational skills. EBCE graduates said the program had been of some help with their reading and math skills. Control group graduates also reported their program giving some help with reading skills but considerable help with math skills. Their perceptions are corroborated by the CTBS scores of reading and math skills during all years of the project.

Table 22 also shows that EBCE graduates believed their program had been more helpful in improving their study habits, writing and vocational skills than did Control graduates toward theirs.

Graduates' perceptions of the adequacy of their programs in gaining self-knowledge and job seeking skills are reported in Table 23. EBCE graduates reported their program to have been a great deal of help in enabling them to get along with others (Item 39) and giving them self-knowledge (Items 32, 33, 43) and job seeking and holding skills (Items 34, 35, 37, 41). Control group scores clustered around the "Some Help" level or below for the thirteen items in this grouping, with the exception of Item 35: How to apply and interview for a job; Item 36: Be ready to on on to more schooling; and Item 39: Get along with others, for which they reported their program as being of considerable help.

TABLE 22

Perceived Helpfulness of Education Program in Providing or Improving Academic or Vocational Skills to 1977 and 1978 Graduates

Items 27-31. *Skill areas:*	EBCE N = 85						Goodrich N = 76					
	Total		Females		Males		Total		Females		Males	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
27. Reading.	3.2	1.0	3.2	1.0	3.3	1.0	3.1	1.1	3.2	1.1	3.1	1.1
28. Math	3.0	1.1	3.0	1.1	3.1	1.1	3.7	1.1	3.6	1.1	3.8	1.2
29. Writing.	4.0	1.0	4.1	0.9	4.0	1.0	3.4	1.2	3.6	1.1	3.1	1.2
30. Study habits	3.7	1.1	3.6	1.2	3.8	1.1	3.0	1.2	3.2	1.2	2.9	1.2
31. Vocational skills.	4.1	1.0	4.1	0.8	4.1	1.1	3.2	1.2	3.0	1.1	3.4	1.4
Total	85		43		42		76		41		35	

Rating Scale (key to $\bar{X}$ = Mean Score)

Great Deal		Some		None
5	4	3	2	1

SD = Standard Deviation:

0 to .60 = Very High Level of Agreement
.61 to 1.20 = High Level of Agreement
1.21 to 1.80 = Moderate Level of Agreement
1.81 & above = Low Level of Agreement

TABLE 23

Perceived Adequacy of Graduates Educational Preparation Based on Questions 32-44 of EBCE and Goodrich Follow-Up Survey

Items 32-44. *How good a job did your educational program do in preparing or helping you:*	EBCE N = 85						Goodrich N = 76					
	Total		Females		Males		Total		Females		Males	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
32. Learn about my own career interests and abilities	4.3	0.9	4.3	0.7	4.3	1.1	3.2	1.0	3.1	1.1	3.3	1.0
33. Match my interests and abilities to possible career choice.	4.3	0.8	4.3	0.7	4.2	0.9	3.0	1.1	3.0	1.1	3.1	1.1
34. Know how to locate job sources. . . .	4.1	0.8	4.1	0.9	4.1	0.8	3.2	1.1	3.1	1.1	3.3	1.0
35. Know how to apply and interview for a job	4.4	0.8	4.5	0.8	4.3	0.8	3.6	1.2	3.8	1.1	3.5	1.2
36. Be ready to go on to more schooling .	3.8	1.1	3.8	1.0	3.8	1.2	3.4	1.2	3.6	1.3	3.2	1.1
37. Learn the skills needed for a job . .	4.1	0.8	4.2	0.8	4.0	0.8	2.9	1.1	2.8	1.1	3.0	1.0
38. Achieve needed academic skills. . . .	3.9	0.8	3.9	0.8	3.8	0.8	3.3	1.3	3.3	1.3	3.2	1.2
39. Get along with others at work/at school.	4.4	0.8	4.4	0.7	4.4	0.9	3.6	1.1	3.8	0.8	3.5	1.3
40. Know how to use tools and equipment.	3.7	1.2	3.5	1.2	4.0	1.0	3.2	1.3	2.8	1.2	3.6	1.3
41. Improve my work habits.	4.0	0.9	4.0	0.8	4.1	1.0	3.0	1.1	3.0	1.3	3.0	0.9
42. Work in a supervisory or leadership role.	3.8	0.9	3.8	1.0	3.8	0.9	2.9	1.3	3.0	1.3	2.8	1.3
43. Understand the role of work in my own and others' life.	4.1	0.9	4.1	0.9	4.1	0.9	3.1	1.1	3.3	1.2	2.9	1.0

- Continued -

TABLE 23 (continued)

- 2 -

Items 32-44. *How good a job did your educational program do in preparing or helping you:*	EBCE N = 85						Goodrich N = 76					
	Total		Females		Males		Total		Females		Males	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
44. Understand in general the U. S. economic system (supply/demand, inflation, recession, etc.)	3.5	1.0	3.4	1.0	3.5	1.0	2.8	1.3	2.9	1.3	2.8	1.4
Total	85		43		42		76		41		35	

Rating Scale (key to $\bar{X}$ = Mean Score)

Great Deal		Some		None
5	4	3	2	1

SD = Standard Deviation:

0 to .60 = Very High Level of Agreement
.61 to 1.20 = High Level of Agreement
1.21 to 1.80 = Moderate Level of Agreement
1.81 & above = Low Level of Agreement

EBCE responses were significantly higher for every item on this table, however.

Items 47-67 of the Graduate Follow-Up Survey asked graduates to specify and rank sources of career education information. Their responses are reported on Table 24 and shown graphically on Figure 1. EBCE graduates tended to rely most heavily on and value most highly the EBCE staff, employers and fellow workers, and their own experience as sources of career education information. Control group graduates, on the other hand, placed greatest reliance on parents, friends, and sources within the school--counselors and teachers.

The data from the follow-up indicate that this objective was met.

TABLE 24

Perceived Value of Sources of Information About Career Education to 1977 and 1978 Graduates

Items 47-67. *Sources of Career Education Information:*	EBCE N = 85									Goodrich N = 76								
	Total			Females			Males			Total			Females			Males		
	$\bar{X}$	SD	R%	$\bar{X}$	SD	R%	$\bar{X}$	SD	R%	$\bar{X}$	SD	R%	$\bar{X}$	SD	R%	$\bar{X}$	SD	R%
(1) Coop Program	3.3	2.0	14	2.8	1.6	19	4.5	2.4	10	5.5	0.7	3	5.5	0.7	5	.0	.0	0
(2) EBCE Program & Staff	5.4	0.7	95	5.5	0.7	98	5.4	0.7	93	4.1	3.6	4	6.0	.0	2	3.3	4.0	6
(3) Work Experience	4.9	1.1	65	4.9	1.1	63	4.8	1.1	67	4.4	1.2	38	4.2	1.4	34	4.6	0.9	43
(4) Club Membership	4.1	1.5	24	4.1	1.4	26	4.1	1.6	21	4.3	1.5	41	4.4	1.5	56	4.1	1.5	23
(5) Counselor(s)	4.2	1.4	67	4.4	1.5	65	4.1	1.2	69	4.3	1.4	74	4.2	1.4	76	4.4	1.4	71
(6) High School Teachers	3.6	1.3	44	3.6	1.2	37	3.6	1.4	50	4.6	1.1	68	4.5	1.1	66	4.6	1.2	71
(7) Regular Classwork	3.4	1.3	45	3.7	1.3	40	3.2	1.2	50	3.9	1.1	64	4.0	1.1	66	3.9	1.0	63
(8) Employers and/or workers in business/industry	5.0	1.0	84	5.1	0.9	77	4.9	1.1	90	4.5	1.2	47	4.6	1.4	39	4.5	1.1	57
(9) Parents	4.4	1.3	64	4.4	1.3	58	4.4	1.3	69	4.9	0.9	74	4.9	1.0	73	4.6	0.7	74
(10) Friends	4.2	1.3	60	4.3	1.5	58	4.1	1.0	62	4.2	1.1	62	4.2	1.2	63	4.1	1.1	60
(11) Brothers & Sisters	4.2	1.4	35	4.3	1.6	37	4.1	1.2	33	4.2	1.3	45	4.4	1.5	51	3.9	1.0	37

Key:
$\bar{X}$ = Mean Score
SD = Standard Deviation
R% = Percentage of total respondents who indicated a given source of career information

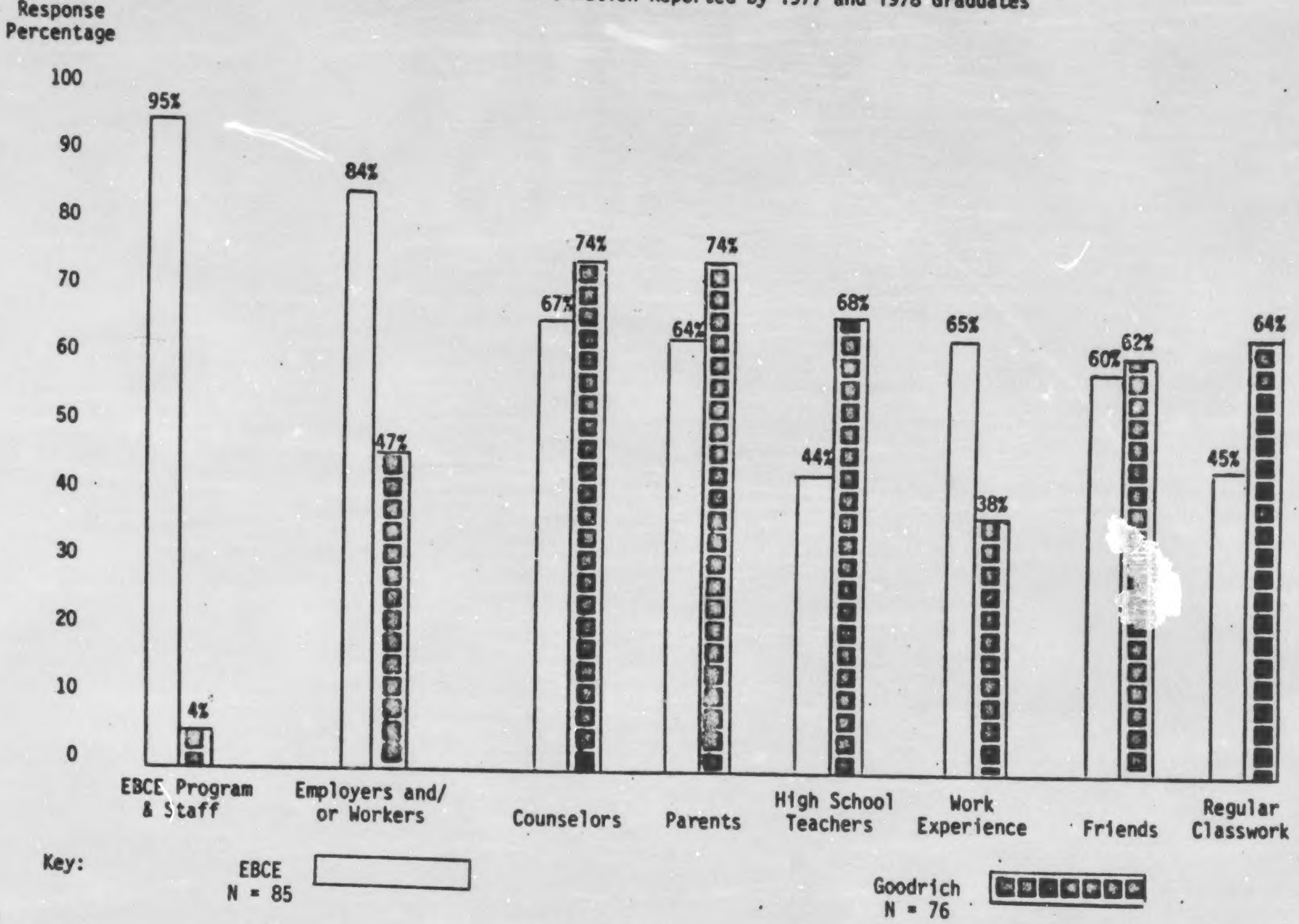
Rating Scale (Key to Mean Score)

Excellent		Adequate		Poor	None Received
6	5	4	3	2	1

INTERPRETATION: Graduates checked and rated only those sources which applied to them. Thus, a low *response percentage* (R%) to a potential source means that few graduates listed it as a viable source of career education information for them. The *mean score* ($\bar{X}$) reflects the value that graduates assigned to a source of information. The lower the R%, the less valid the mean score. *Standard deviation* is a measure of the range of the scores -- the smaller the number, the greater the consistency of ratings; the larger the number, the greater the variation in ratings.

FIGURE 1

Graphic Comparison of Table 24 Showing Eight Most Frequently Used Sources of Career Education Information Reported by 1977 and 1978 Graduates



1.7 Parents of EBCE students will have positive attitudes toward the EBCE program.

Parents of EBCE students were asked to complete the AEL Parent Survey at the end of the school year. The mean scores and standard deviations of parents' responses show consistently high regard for the EBCE program and staff. The survey questions and results are reported in Table 25.

The Parent Surveys also elicited written comments about the perceived strengths and weaknesses of the EBCE program and positive and negative changes in their son or daughter as a result of participation. Overwhelmingly, parents praised the EBCE concept, the Fond du Lac project staff, and site experiences for bringing about increased maturity, career decisions, poise, and clear and independent thinking in their children.

The few weaknesses or negative effects reported included losing touch with peers at Goodrich, lack of transportation to sites, potential exploitation doing menial labor, and resource persons allowing absenteeism or tardiness.

Interviews with parents of EBCE students corroborated their responses on the survey instrument. This objective was met by the EBCE program.

TABLE 25

EBCE Parents' Assessment of the 1978-79 EBCE Program

Statement	Responses	N = 45
	Mean	SD
1. How well does the EBCE Program compare overall with the past school experiences of your daughter or son?	4.4*	0.8
2. If you had it to do over again, would you want your son or daughter to participate in the EBCE Program?	4.8	0.5
3. How well do you think your son or daughter likes the EBCE Program compared with past school experiences?	4.6	0.7
6. Have you received enough information about your son's or daughter's progress in the EBCE Program?	4.2	0.9
7. In comparison with regular schools, how much opportunity did the EBCE Program provide your daughter or son for learning about occupations?	4.8	0.5
8. What effect, if any, has the EBCE Program had on helping your son or daughter form career plans?	4.6	0.7
9. In comparison with regular schools how much opportunity did the EBCE Program provide your son or daughter for general learning?	4.1	0.8
10. In comparison with past experiences in regular schools, how motivated is your daughter or son to learn in the EBCE Program?	4.5	0.7
11. How would you rate the approaches to learning used in the EBCE Program?	4.6	0.6

Table 25 (continued)

14. How often does your son or daughter talk to you about what's going on in the EBCE Program?	4.2	1.0
17. How would you rate the general quality of the EBCE Program staff?	4.5	0.6

*The rating scale used on the AEL Parent Survey represents a continuum of opinion ranging from Very Negative (1) to Very Positive (5). Descriptors at the negative end included *Worse, No, Less, Bad, Never, None and Poor*. Descriptors at the postive end included *Better, Yes, More, Good, Frequently and Excellent*.

Rating Scale
Very Negative Very Positive
1 . . . 2 . . . 3 . . . 4 . . . 5

1.8 Experience-site resource persons and contact persons will have positive attitudes toward the EBCE program.

The same employer questionnaire used in the two previous years of the project was sent to the contact or resource persons at each of the participating businesses and industries in the Fond du Lac EBCE program. The questionnaire requested the resource persons to provide information on the impacts of EBCE on their companies, their evaluation of the program and other data needed in the administration of the program. Their responses, shown on Table 26, reflect very positive opinions about all aspects of the EBCE program.

Resource persons believed that students had been interested in their site assignment and in EBCE itself (Items 23 and 24), that their companies would continue working with the EBCE project (Item 28), and that the EBCE program had functioned as they were told it would (Item 30). Item 27, however, indicated that they would like more feedback about student progress during and after placement.

Table 27 reports the degree and type of impact EBCE participation has had on resource sites. Resource persons reported minor impact on quality and quantity of work done by regular employees or on company hiring and training practices, although that which has occurred is favorable.

Resource person's written responses to the open-ended survey questions as well as interviews with five randomly selected resource persons confirm the data. The ever increasing number of sites willing to participate and the high retention rate are evidence of positive attitudes toward the EBCE program.

Third party evaluators concluded that this objective has been met.

TABLE 26

Resource Persons' Evaluation of 1978-79 EBCE Program

Statement from Resource Person Questionnaire	Responses N = 144	
	$\overline{X}$	SD
23. Do you think the EBCE students have been interested in your site?	1.2*	0.4
24. Based on the EBCE students placed at your site, do you feel these students were interested in the concept of EBCE?	1.1	0.4
27. Have you been satisfied with the feedback that you received relating to what happens to the students after he leaves your site?	2.0	0.8
28. Do you think your company will continue working with the EBCE project during the next couple of years?	1.2	0.4
30. Do you feel the program functioned as you were led to believe when you were recruited as an employer site?	1.1	o.3

*KEY: 1 = Yes
2 = Don't Know
3 = No

$\overline{X}$ = Mean
SD = Standard Deviation
N = Number

TABLE 27

Resource Persons' Report of Impacts of EBCE Participation on Their Firms, 1978-79

N = 144

To what extent has the EBCE Program had an impact on?	How much Impact?		Value of Impact?	
	$\overline{X}$	SD	$\overline{X}$	SD
33-34 Quality of work performed by regular employees	2.5	0.7	2.6	0.5
35-36 Amount of work performed by regular employees	2.6	0.8	2.5	0.7
37-38 Company hiring practices	2.1	0.6	2.2	0.7
39-40 Company training practices	2.3	0.7	2.6	0.7
	KEY: 1 = Don't know 2 = No Impact 3 = Some Impact 4 = Much Impact		KEY: 1 = Bad Impact 2 = Don't Know 3 = Good Impact	

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1.9 EBCE dissemination workshops will provide adequate information for those attending.

The Fond du Lac EBCE staff had two fulltime staff assigned to dissemination-related tasks of promoting awareness and implementation of EBCE programs in other school districts. Every school district in Wisconsin was informed about EBCE through mass mailings and conference presentations made by the project's dissemination coordinator. In cities with a population of 15,000 or more, he made telephone follow-ups with their schools' principals, curriculum coordinators, or local vocational education coordinators. The dissemination coordinator also invited representatives from these schools to visit the Fond du Lac project and/or he made on site visits and presentations to the various districts to further explain the program's nature and answer preliminary questions about how EBCE functions.

Districts seriously interested in initiating an EBCE program then scheduled a training and technical assistance workshop from EBCE project personnel. Each of these districts received a set of the EBCE training manuals to facilitate understanding of EBCE concepts and knowledge of ow to implement and manage the component parts of an EBCE program. The manuals included a Staff Guide, Academic Guide, Career Guide, Cross Reference Catalog, and Student Workbook.

Training and technical assistance were provided to staff at 21 school districts: 19 districts in Wisconsin, one in Michigan, and one in Illinois. Five of the 21 districts have adopted "pure" EBCE programs; three have adapted the concepts to fit existing programs aimed at dropout prevention; ten have adapted it for Special Education programs; one adapted it to a one-time exploration at the ninth-grade level; and two districts are still undecided.

Participants at each training workshop were asked to complete an EBCE Technical Assistance Evaluation Form. The instrument, developed by the Center for Vocational, Technical and Adult Education at UW-Stout, sought to establish how helpful the training had been in learning how to manage a wide range of EBCE activities. The instrument is included in Appendix A. The evaluation results are shown on Table 28.

The continuum of response choices on the evaluation instrument ranged from No Help (1), to Helpful (3), to Great Deal of Help (5). On Table 28 a review of the mean score column for each of the 28 specific technical assistance items shows ratings well above "3" (helpful) and that most were within the "great deal of help" range. Item 29 asked for an overall assessment of how helpful the training had been. The mean score of 4.6 suggests that participants were well satisfied with the content and quality of the sessions.

Third party evaluators concluded that this objective was achieved.

TABLE 28

Perceived Value of EBCE Technical Assistance Training Sessions to Participants, 1978-79

Statement from Technical Assistance Evaluation Form	Responses N = 33	
	$\bar{X}$	SD
● How helpful were the training sessions in:		
1. Explaining the concepts of Experience Based Career Education (EBCE)	4.9	0.5
2. Defining the terms and vocabulary of EBCE	4.2	0.9
3. Defining the role and responsibilities of each EBCE staff person	4.6	0.7
4. Learning how to get an EBCE program started in our school/agency	4.2	0.8
5. Learning ways of handling recruitment of students/clients to EBCE	4.2	0.9
6. Learning how to translate EBCE experiences into course requirements	4.2	0.8
7. Learning about insurance coverage for EBCE students at work sites	3.9	0.9
8. Learning the process for placing students/clients in EBCE	4.5	0.8
9. Learning how to monitor attendance of students/clients in EBCE	4.4	0.8

- Continued -

TABLE 28 (Continued)

Statement from Technical Assistance Evaluation Form	Responses N = 33	
	$\overline{X}$	SD
10. Learning how to manage the instructional component of EBCE	4.3	0.9
11. Answering your questions and/or those of other participants	4.8	0.6
12. Learning how to use the EBCE Inquiry process	4.6	0.6
13. Learning how to develop Student Activity sheets	4.8	0.6
14. Finding how to evaluate student progress	4.2	1.0
15. Learning how to handle EBCE record-keeping needs	4.1	1.0
16. Learning how to individualize instruction for each student	4.3	1.0
17. Learning how to use EBCE materials	4.3	0.7
18. Learning how to use the Worker Trait Groups and Data/People/Things information	4.2	0.8
19. Learning how to incorporate Group, counseling, and/or other student suport services in EBCE	3.5	1.1

- Continued -

TABLE 28 (Continued)

Statement from Technical Assistance Evaluation Form	Responses N = 33	
	$\bar{X}$	SD
20. Learning how student career guides are to be used	3.9	0.9
21. Learning how to manage day-to-day operation of EBCE	3.8	1.0
22. Learning how to assure and monitor student safety on the site	3.4	1.2
23. Learning how to develop site manuals, write task statements, etc.	4.6	0.8
24. Learning techniques for obtaining and retaining resource persons and sites	4.4	0.9
25. Learning how to involve community persons in EBCE	4.4	0.7
26. Learning how to evaluate your own EBCE program	3.6	1.0
●. How helpful were the training sessions in:		
27. Learning how to modify or adapt the EBCE program to meet your special needs	3.9	1.0
28. Managing the administrative aspects of the EBCE program	3.9	0.8
29. Overall, how helpful was the technical assistance training to you?	4.6	0.7

PROCESS OBJECTIVES

Introduction

Process objectives are the enablers which allow student outcome objectives to be achieved. Evidence of attainment of all student outcome objectives as documented in some detail in Section One would not have been possible if appropriate attention to the process objectives had not been given in the management of the EBCE project. The process objectives reviewed in this section will, therefore, be treated in less detail than the student outcome objectives in Section One. Readers are referred to the numerous measures reported in that section as corroboration for achievement of the process objectives.

Interviews with the project staff and review of the project records were the primary methods of determining whether the process objectives had been met. Based on evidence cited under each of the following objectives, the third party evaluators concluded that all process objectives have been met.

2.1 The EBCE Management-By-Objectives system will be utilized in implementing the AEL/EBCE program model in Fond du Lac.

Project activities and materials were reviewed regularly by the third party evaluators who found that the actual management of the project was consistent with the project's established objectives and evidenced by effectiveness and timely completion of project activities.

Successful management was also documented by graduates, parents, resource persons, and recipients of training and technical assistance as documented in Student Outcome Objectives 1.6, 1.7, 1.8 and 1.9.

2.2 Fond du Lac's EBCE program recruitment efforts will be directed towards obtaining a representative sample of the total student population at the 11th and 12th grade levels.

The same processes for recruitment were used as in the first two years of the project. The grade point averages for the EBCE and Control groups are reported in Table 29. An analysis of the differences in the grade point averages (GPA) indicated that there was no significant difference between the GPA of the EBCE students and of the seniors at Goodrich

The third party evaluators found that the grade point averages were representative of those at Goodrich.

Table 29
GPA for EBCE and Goodrich Students

Group	GPA $\overline{X}$	GPA SD	N
EBCE	2.09	.55	60
Goodrich	2.06	.71	500

2.3. A mechanism to periodically update the Fond du Lac community about EBCE experiences will be developed and implemented.

Formal public relations effects continued during the final year of the project, though on a more limited scale. Interviews by the third party evaluators with 17 citizens on-the-street and in shopping centers, as well as with school board representatives and non-EBCE participating members of the business community, confirm that the project is widely known and understood in Fond du Lac.

The project's public relations function was adequately achieved by an informal network of contacts and favorable publicity generated by current and former EBCE students, their families, and the employees of more than 200 business and industrial resource sites in the Fond du Lac community.

2.4 The AEL/EBCE concepts and objectives as spelled out in AEL published materials will be used to deliver EBCE experiences to the experimental group of students.

The conceptual framework and objectives of the Fond du Lac project remained solidly based on the AEL/EBCE materials. The Fond du Lac staff developed and published a five volume set of materials which presented a "Wisconsin-style" approach to the AEL/EBCE model. The materials include a Staff Guide, Academic Guide, Career Guide, Student Workbook, and Cross Reference Catalog, all of which expand upon and are firmly committed to the original AEL/EBCE concepts.

2.5 Activity Sheets will be utilized to document and monitor a student's academic progress during the time spent in the EBCE program.

The Fond du Lac staff developed additional materials which explain in detail the importance of activity sheets and which enable translation of student experiences into measurable learning activities. Sample, "standardized" activity sheets were also developed as starting points from which Learning Coordinators could go to develop activity sheets to meet the specific academic needs of individual students. Review by third party evaluators of activity sheets in students' files showed consistent activity involving a full range of academic skills.

2.6 AEL/EBCE's inquiry model will be used to select appropriate entries on the Activity Sheets.

Interviews with students as they worked on activity sheets in the EBCE Learning Center as well as review of completed activity sheets in students' files revealed that the five-step Inquiry process was used regularly. Several students said they had used it so often for EBCE purposes that they now found themselves automatically applying the process whenever they were in a problem-solving or decision making situation.

2.7 Each EBCE student will have an individualized and personalized academic program developed for her/him.

Student activity sheets documented that each student's academic experiences--the objectives, learning activities, and evaluation--were designed around his/her site placement choices and abilities as measured by basic reading and math skill inventories and subsequent on-site performance in these areas. EBCE staff reviewed each student's cumulative high school record to build each person's program around known course needs for graduation requirements.

Interviews with students in the Control group in the regular high school program confirmed that their classes had group objectives rather than individualized learning activities.

2.8 Activity Sheets will be written, whenever possible, utilizing educational experiences to be found at the student's experience-site placements.

In most instances, objectives and learning activities for activities sheets were based on experiences in which the student would be involved at site placements. Those which weren't tended to involve large group, in-house EBCE activities, and more global concepts such as sex role stereotyping and non-traditional career opportunities--concepts common to all students. Standardized activity sheets were developed for concepts common to all.

2.9 The Student Career Guide will be used by EBCE students to summarize and interpret the experiences acquired at the community experience-sites.

Interviews with 15 students during in-house days confirmed that they used the Career Guide on a continuing basis. Many expressed the opinion that the self-administered record keeping was "a pain", but conceded that it did give them good information about themselves and caused them to analyze their experiences and what they liked and disliked about various work situations. Review of the Students' Career Guide corroborated their statements.

2.10 The EBCE Request for Placement form will be used.

Evaluation of the student placement process revealed systematic, centralized control of site placements by project staff with meticulous compliance with procedures developed for all phases--from student's request for placement, to assignment, on-site monitoring, and evaluation. At each step, proper forms and charts were used to assure student satisfaction and safety as well as to maintain good relations with cooperating experience sites.

2.11 Activity Sheets will be interdisciplinary in the kinds of assignments entered thereon.

Activity sheets were interdisciplinary in that they cross-referenced two or more traditional subject areas and required students to consider relationships and to use or apply the skills of one subject area in order to deal with another.

Review of activity sheets from early in the school year to near the end of the school year showed marked increase in students' ability to consider an issue or problem in an interdisciplinary way. Students said the sheets helped them see how school subjects apply to the "real world" as well as how subjects relate to each other.

2.12 Worker Trait Groups will have been assigned to experience site resource persons.

Examination of the Experience Site Log Book documented that all sites and resource persons were categorized by worker trait group, with a separate page for each worker trait group. Resource persons were assigned to worker trait groups on the basis of their job descriptions and/or functional responsibilities. All Fond du Lac EBCE materials have been rewritten to correspond to the revised Dictionary of Occupational Titles' 66 worker trait groups in contrast to the 114 formerly used.

2.13 Learning Coordinators will make regular site visits.

Learning Coordinators' records showed that they made weekly site visits for most student placements and biweekly visits to others, with telephone contacts in between.

Resource persons also reported that Learning Coordinators made site visits on a regular basis, and expressed the opinion that the Learning Coordinators effectively monitored and guided learning activities appropriate to student placements.

2.14 The Community Advisory Council will meet once a month.

Third party evaluators reviewed minutes of the Community Advisory Council's monthly meetings. Their meetings had a high percentage of members attending and a high level of participation by numerous members at the meetings. The council appears representative of the Fond du Lac community and enthusiastically supported EBCE concepts and activities throughout the year.

2.15 Training of new EBCE staff will have been accomplished according to an established timetable.

No new staff was added during the 1978-79 project year but existing staff continued to receive training in the use of EBCE methods and materials. Publication of the Wisconsin-style EBCE materials occasioned staff training in ways to use the materials most effectively. Adequacy of the EBCE staff's training is evidenced by the attainment of the student outcome objectives listed in Section One.

Fond du Lac EBCE staff have provided training and technical assistance to ther school districts thinking of adapting or adopting EBCE.

2.16 OSHA regulations will be considered in making student placements at experience sites.

The safety and well-being of EBCE students at work sites was closely monitored by the Placement Coordinator/Experience Site Analyst. She maintained a book of OSHA regulations, child labor laws and other state regulations. Against those rules she routinely evaluated any potential experience site activity in which a student might participate. Any restrictions in the degree of allowable student participation (exploratory, assisting, etc.) are then specified in the Experience-Site Guides.

Prior to each placement, resource persons and learning coordinators are reminded verbally of these restrictions by the placement coordinator, and the restrictions and precautionary advice also appear in writing on each placement form. Any experience sites which fail to provide a safe environment for EBCE students are dropped.

On-site visits indicated that resource persons are aware of the need to comply with OSHA and other regulatory standards governing the safety of students placed at their sites.

This objective has been met.

2.17 Students are placed at experience sites four days per week for every week assigned to a particular site.

Students report to their experience site four days out of every five for the duration of each placement. They worked the hours of the resource person on days at the site. Resource persons were instructed to report any student absence to the EBCE office staff which monitored attendance. Learning coordinators during site visits also checked whether students had been on the job. Students reported to their learning coordinator for the inhouse instruction on the fifth day of each week.

Third party evaluators concluded that proper placement and attendance procedures were followed.

2.18 Sex role stereotyping will be confronted whenever and wherever it is found in site placements and counseling, and dealt with in a constructive manner.

Third party evaluators concluded that this objective has been met. Learning Coordinators have designed instruction involving Activity Sheets and small group activities to reduce students' sex role stereotyped concepts and to increase their awareness of opportunities in nontraditional occupations for men and women. Each Learning Coordinator spent time on this topic and one required at least one week on a nontraditional job.

Responses of EBCE students reported in Objective 1.5 indicate that their career choices are not limited by their own perceptions of sex role. The Placement Coordinator, however, still encounters instances of businesses refusing to place female students at male dominated sites. She reports that small, locally owned businesses are those most likely to reject a student for placement on the basis of sex. Experience sites comprised of relatively young employees or from large industry rarely make such restrictions, she reported.

Contact persons who flatly refuse to accept a student on the basis of sex pose a dilemma for project personnel, forcing them to decide whether to discontinue the site. Dropping the site is perceived as a poor solution, however, since it then is not available to students of either sex, and the channels of communication are severed so there is no opportunity for future change.

Several resource or contact persons who were resistant though not adamantly opposed to placement of certain sexes have been won over in the past three years by gradual, diplomatic attempts to change their attitudes. Placement of carefully chosen students have counteracted their resistance and resulted in successful placement of students in nontraditional work roles. Thirty-four nontraditional site explorations were scheduled during the school year and nontraditional role models were available as resource persons at seven of the sites.

Both EBCE and Control group students revealed that they perceive few careers based on sex-role stereotyping. Survey responses reported in Objective 1.5 confirm their oral interview comments. Control group students, however, by the nature of their classroom oriented approach lacked the opportunity to verify their views and had fewer learning activities and opportunities in nontraditional careers.

2.19 EBCE Project will conduct workshops for representatives from school districts in Wisconsin and selected school systems from surrounding states. Project staff will also host visitors from a number of Wisconsin school systems.

The 33 participants of training and technical assistance on EBCE sessions who returned the evaluation instrument reported the training sessions as thorough, comprehensive, and extremely helpful. Their comments are reported in Table 28 in 1.9.

Persons who received training included elementary and secondary classroom teachers, high school administrators and representatives of agencies such as the Department of Vocational Rehabilitation.

Project records also indicated that a number of persons had visited the project.

Appendix A

Instruments

Center for Vocational, Technical
and Adult Education
UW-Stout, Form 710.B1

Work Opinionnaire

Please complete the blanks below.

Name ____________________________________ Date ______________

School ___________________________________ City ______________

Social Security Number ____________________

Directions: Read the statements that follow. There are no right or wrong answers. Respond as you feel based on your experiences. If you you Strongly Disagree with a statement, circle the "1". If you Disagree, circle the "2". If you are Undecided or neutral, circle the "3". If you Agree with the statement, circle the "4". If you Strongly Agree, circle the "5". Mark your answers on this form. Your answers will be kept confidential.

SD = 1 D = 2 U = 3 A = 4 SA = 5

	Responses				
STATEMENTS	SD 1	D 2	U 3	A 4	SA 5
1. Working is a favorable (enjoyable) part of our lives	1	2	3	4	5
2. People are satisfied with themselves when they are working	1	2	3	4	5
3. Work is not interesting	1	2	3	4	5
4. People should always expect money for their work	1	2	3	4	5
5. A worker should obey company rules	1	2	3	4	5
6. Working and happiness go together	1	2	3	4	5
7. Being successful in your work is not important	1	2	3	4	5
8. Work is boring or unpleasant	1	2	3	4	5
9. Working is a necessary part of life	1	2	3	4	5
10. Being happy in your job is the most important part of work	1	2	3	4	5
11. Most people are looking for work which requires little effort and lots of pay . .	1	2	3	4	5
12. Work is dirty and noisy	1	2	3	4	5

- over please -

Form 710.B2

STATEMENTS	Responses				
	SD 1	D 2	U 3	A 4	SA 5
13. The best work is done when it is interesting .	1	2	3	4	5
14. People learn while they work	1	2	3	4	5
15. The idea of work is old fashioned and outdated	1	2	3	4	5
16. There is a type of work available for everyone	1	2	3	4	5
17. Most people work only because other people expect them to work	1	2	3	4	5
18. It is not necessary to work if you are willing to be supported by someone else	1	2	3	4	5
19. Jobs are an important way people have to express themselves	1	2	3	4	5
20. If people cannot find jobs which exactly match their interests, they are better off not working	1	2	3	4	5
21. Most people who work really enjoy their jobs .	1	2	3	4	5
22. I look for tasks or jobs to occupy my time . .	1	2	3	4	5
23. Everyone can find work of interest	1	2	3	4	5
24. Work provides an opportunity for people to develop their abilities	1	2	3	4	5

Please complete the questions below.

25. Sex:

____ (1) Male
____ (2) Female

26. In what grade are you in school?

____ (1) 8th grade or less
____ (2) 9th grade
____ (3) 10th grade
____ (4) 11th grade
____ (5) 12th grade
____ (6) Other ________________

Center for Vocational, Technical
and Adult Education
UW-Stout, Form 762.A1

Youth Employment Questionnaire

Name ____

School ____________________ City ______________ Date __________

Social Security Number (Optional) ______________________________

Directions: Listed below are some characteristics of persons who work. If you feel a characteristic is mostly male, circle 1. If, in your opinion, it is more male than female, circle 2. If you feel it is equally male or female, circle 3. If you think it is more female than male, circle 4. If you think it is mostly female, circle 5.

Example: Watching football . . . . 1 [✓ 2] 3 4 5

CHARACTERISTICS	Male 1	More Male Than Female 2	Either Male or Female 3	More Female Than Male 4	Female 5
Ability to:					
1. Organize	1	2	3	4	5
2. Plan	1	2	3	4	5
3. Sell or convince	1	2	3	4	5
4. Communicate effectively	1	2	3	4	5
5. Work with hands	1	2	3	4	5
6. Do the same task over and over	1	2	3	4	5
7. Be willing to travel	1	2	3	4	5
8. Work with numbers	1	2	3	4	5
9. Do clerical tasks	1	2	3	4	5
10. Lift objects	1	2	3	4	5
11. Work with people	1	2	3	4	5
12. Do mechanical tasks	1	2	3	4	5
13. Do outside work	1	2	3	4	5
14. Be aware of others' feelings	1	2	3	4	5
15. Be neat in habits	1	2	3	4	5
16. Accept responsibility	1	2	3	4	5
17. Be good with children	1	2	3	4	5
18. Take control of a situation	1	2	3	4	5
19. Do work that gets hands dirty	1	2	3	4	5
20. Learn skills quickly	1	2	3	4	5
21. Solve problems	1	2	3	4	5
22. Be inventive	1	2	3	4	5

- over please -

Form 762.A2

Directions: Listed below are some occupations. If, in your opinion, the occupation is best suited to a male, circle 1. If you feel it is better suited to a male than a female, circle 2. If you see it as equally suited to male or female, circle 3. If you think it is better suited to a female than male, circle 4. If you feel it is best suited to a female, circle 5.

OCCUPATIONS	Male 1	More Male Than Female 2	Either Male or Female 3	More Female Than Male 4	Female 5
23. Factory worker	1	2	3	4	5
24. Military officer	1	2	3	4	5
25. Radio repair worker	1	2	3	4	5
26. Doctor	1	2	3	4	5
27. Teacher aide	1	2	3	4	5
28. Dental technician	1	2	3	4	5
29. Secretary	1	2	3	4	5
30. Business owner/operator	1	2	3	4	5
31. Lawyer	1	2	3	4	5
32. Cook	1	2	3	4	5
33. Scientist	1	2	3	4	5
34. Fire fighter	1	2	3	4	5
35. Nurse	1	2	3	4	5
36. Train engineer	1	2	3	4	5
37. News reporter	1	2	3	4	5
38. Veterinarian	1	2	3	4	5
39. Police officer	1	2	3	4	5
40. Teacher	1	2	3	4	5
41. Judge	1	2	3	4	5
42. Writer	1	2	3	4	5
43. Electrician	1	2	3	4	5
44. Landscaper	1	2	3	4	5
45. Senator	1	2	3	4	5
46. Custodian	1	2	3	4	5

---

47. Sex:

_____ (1) Male
_____ (2) Female

48. What is the highest grade you have completed in school?

_____ (1) 8th grade or less
_____ (2) 9th grade
_____ (3) 10th grade
_____ (4) 11th grade
_____ (5) 12th grade
_____ (6) Other ______________

nter for Vocational, Technical
d Adult Education
-Stout, Form 766.A1

GOODRICH HIGH SCHOOL GRADUATE FOLLOW-UP SURVEY

Please write any name and/or address changes right on the label.

Sex: _____ (1) Female _____ (2) Male

Year you graduated from Goodrich High School:

_____ (1) 1976
_____ (2) 1977
_____ (3) 1978
_____ (4) 1979
_____ (5) 1980
_____ (6) Other ________________

What year were you in the EBCE (Experience Based Career Education) program at Bragg School?

_____ (1) Junior year
_____ (2) Senior year

Length of time spent in the EBCE program:

_____ (1) One semester
_____ (2) Two semesters

Was the length of time you were in the EBCE program:

_____ (1) too short
_____ (2) just right
_____ (3) too long

Since graduation, have you been or are you now employed at an EBCE job site where you were placed during high school?

_____ (1) Yes
_____ (2) No

I am presently: *(Please check one of the following nine statements)*

_____ (1) employed FULL time in a paid non-military occupation. *(If checked go to Question 8 on the next page.)*
_____ (2) employed FULL time in the military service. *(If checked go to Question 10.)*
_____ (3) employed PART time--not in school. *(If checked go to Question 8 on the next page.)*
_____ (4) employed PART time while in school. *(If checked go to Question 8 on the next page.)*
_____ (5) full time student--not employed part time. *(If checked go to Question 10.)*
_____ (6) full time homemaker--not looking for paid employment. *(If checked go to Question 10.)*
_____ (7) full time homemaker--looking for paid employment. *If checked go to Question 10.)*
_____ (8) unemployed but looking for paid employment. *(If checked go to Question 10.)*
_____ (9) unemployed--not looking for paid employment. *(If checked go to Question 10.)*

- over please -

rm 766.A2

I am presently employed as ______________________________ | 1 | 2 | 3 | 4 |
job title   Do not write in these boxes

My present hourly wage grouping before deductions is: *(Your response to this question will be used only to determine average wages. Individual responses will not be reported.)*

_____ (1) under $2.00 per hour
_____ (2) $2.00 to $2.99 per hour
_____ (3) $3.00 to $3.99 per hour
_____ (4) $4.00 to $4.99 per hour
_____ (5) $5.00 to $5.99 per hour
_____ (6) $6.00 to $6.99 per hour
_____ (7) $7.00 to $7.99 per hour
_____ (8) Over $8.00 per hour

How many jobs--either full- or part-time--from different employers have you held since graduating from high school?

_____ (1) None
_____ (2) 1 or 2
_____ (3) 3 or 4
_____ (4) 5 or 6
_____ (5) 7 or more

11. Since leaving high school I have taken further training in: *(Check all that apply)*

_____ (1) a vocational school one-year diploma program
_____ (2) a vocational school two-yer associate degree program
_____ (3) a four-year university program
_____ (4) an apprenticeship program
_____ (5) an in-service or on-the-job training program
_____ (6) I have not taken any further training
_____ (7) Other ____________________

12. Are you planning for a career related to a specific job in which you had EBCE work experience while in high school?

_____ (1) Yes
_____ (2) No

Please indicate how much the EBCE program helped prepare you for or become aware of: *(Circle a number for each statement)*

	Rating Scale				
	Great Deal		Some		None
	5	4	3	2	1
New (emerging) occupations	5	4	3	2	1
What future employers or educators will expect of me	5	4	3	2	1
Traditionally male jobs which females now enter	5	4	3	2	1
Traditionally female jobs which males now enter	5	4	3	2	1
My own feelings about entering a job field, traditionally held by persons of the opposite sex	5	4	3	2	1
Occupations which have many job opportunities	5	4	3	2	1

- please go to next page -

766.A3

	Rating Scale				
	Great Deal 5	4	Some 3	2	None 1
Occupations which are overcrowded with workers and job applicants	5	4	3	2	1
Educational opportunities after high school	5	4	3	2	1
How much training is needed to pursue my career goal and where to go to get it	5	4	3	2	1
Work and career opportunities available in the Fond du Lac area	5	4	3	2	1
Education and training opportunities in the Fond du Lac area	5	4	3	2	1
Jobs and types of careers related to my own career goal	5	4	3	2	1
How choice of occupation may affect my life style--where I live, amount of free time, friends and fellow workers, etc.	5	4	3	2	1
Other ______________________________	5	4	3	2	1

30.
what degree did the EBCE program
vide or improve your academic skills in

reading	5	4	3	2	1
math	5	4	3	2	1
writing	5	4	3	2	1
study habits	5	4	3	2	1
To what degree did the EBCE program provide or improve your vocational skills?	5	4	3	2	1

How good a job did the EBCE program do in preparing or helping you:
(*Circle a number for each statement*)

	Rating Scale				
	Excellent 5	Good 4	Average 3	Fair 2	Poor 1
. Learn about my own career interests and abilities	5	4	3	2	1
. Match my interests and abilities to possible career choice	5	4	3	2	1

- over please -

	Rating Scale				
	Excellent 5	Good 4	Average 3	Fair 2	Poor 1
Know how to locate job sources	5	4	3	2	1
Know how to apply and interview for a job	5	4	3	2	1
Be ready to go on to more schooling . .	5	4	3	2	1
Learn the skills needed for a job . . .	5	4	3	2	1
Achieve needed academic skills	5	4	3	2	1
Get along with others at work/at school	5	4	3	2	1
Know how to use tools and equipment . .	5	4	3	2	1
Improve my work habits	5	4	3	2	1
Work in a supervisory or leadership role	5	4	3	2	1
Understand the role of work in my own and others' lives	5	4	3	2	1
Understand in general the U.S. economic system (supply/demand, inflation, recession, etc.)	5	4	3	2	1
Other ____________________	5	4	3	2	1

On the left, check (✓) the sources from which you received career education information. (Check all that apply.) THEN circle the number in the rating scale that shows the value of each source you checked.

			Rating Scale					
			Excellent 6	5	Adequate 4	3	Poor 2	None Received 1
-47.	_____	Coop program	6	5	4	3	2	1
-49.	_____	EBCE program and staff	6	5	4	3	2	1
-51.	_____	Work experience while in high school	6	5	4	3	2	1
-53.	_____	Club memberships and activities	6	5	4	3	2	1
-55.	_____	Counselor(s)	6	5	4	3	2	1
-57.	_____	High school teachers	6	5	4	3	2	1
-59.	_____	Regular classwork	6	5	4	3	2	1
-61.	_____	Employers and/or workers in business or industry	6	5	4	3	2	1

- please go to next page -

/66.A5

	Rating Scale					
	Excellent 6	5	Adequate 4	3	Poor 2	None Received 1
3. _____ Parents or guardians	6	5	4	3	2	1
5. _____ Friends	6	5	4	3	2	1
7. _____ Brothers or sisters	6	5	4	3	2	1
9. _____ Others	6	5	4	3	2	1

What effect might having been in EBCE have on you five years from now?

Add any comments you would like about your educational experiences in the EBCE or Goodrich High School program.

enter for Vocational, Technical
nd Adult Education
W-Stout, Form 767.A1

GOODRICH HIGH SCHOOL GRADUATE FOLLOW-UP SURVEY

Please write any name and/or address changes right on the label.

1. Sex: _____ (1) Female _____ (2) Male

2. Year you graduated from Goodrich High School:

_____ (1) 1976
_____ (2) 1977
_____ (3) 1978
_____ (4) 1979
_____ (5) 1980
_____ (6) Other ____________

3. Did you participate in a Capstone vocational education program at Goodrich High for at least one semester while in 12th grade?

_____ (1) Yes (Go to #4)
_____ (2) No (Go to #7)

4. In which Capstone vocational education program did you participate? (Check all that apply).

_____ (1) Coop
_____ (2) Project
_____ (3) Simulation

5. Length of time spent in the Capstone program:

_____ (1) One semester
_____ (2) Two semesters

6. Since graduation, have you been or are you now employed at a place where you had Coop/Capstone work experience during high school?

_____ (1) Yes
_____ (2) No

7. I am presently: *(Please check* ***one*** *of the following nine statements)*

_____ (1) employed FULL time in a paid non-military occupation. *(If checked go to Question 8 on the next page.)*
_____ (2) employed FULL time in the military service. *(If checked go to Question 10.)*
_____ (3) employed PART time--not in school. *(If checked go to Question 8 on the next page.)*
_____ (4) employed PART time while in school. *(If checked go to Question 8 on the next page.)*
_____ (5) full time student--not employed part time. *(If checked go to Question 10.)*
_____ (6) full time homemaker--not looking for paid employment. *(If checked go to Question 10.)*
_____ (7) full time homemaker--looking for paid employment. *If checked go to Question 10.)*
_____ (8) unemployed but looking for paid employment. *(If checked go to Question 10.)*
_____ (9) unemployed--not looking for paid employment. *(If checked go to Question 10.)*

Form 767.A2

8. I am presently employed as ______________________________ | 1 | 2 | 3 | 4 |
job title   Do not write in these boxes

9. My present hourly wage grouping before deductions is: *(Your response to this question will be used only to determine average wages. Individual responses will not be reported.)*

_____ (1) under $2.00 per hour
_____ (2) $2.00 to $2.99 per hour
_____ (3) $3.00 to $3.99 per hour
_____ (4) $4.00 to $4.99 per hour
_____ (5) $5.00 to $5.99 per hour
_____ (6) $6.00 to $6.99 per hour
_____ (7) $7.00 to $7.99 per hour
_____ (8) Over $8.00 per hour

0. How many jobs--either full- or part-time--from different employers have you held since graduating from high school?

_____ (1) None
_____ (2) 1 or 2
_____ (3) 3 or 4
_____ (4) 5 or 6
_____ (5) 7 or more

11. Since leaving high school I have taken further training in: *(Check all that apply)*

_____ (1) a vocational school one-year diploma program
_____ (2) a vocational school two-yer associate degree program
_____ (3) a four-year university program
_____ (4) an apprenticeship program
_____ (5) an in-service or on-the-job training program
_____ (6) I have not taken any further training
_____ (7) Other ____________________

12. Are you planning for a career related to a specific job in which you had Coop/Capstone work experience while in high school?

_____ (1) Yes
_____ (2) No

Please indicate how much Goodrich High School helped prepare you for or become aware of: *(Circle a number for each statement)*

	Rating Scale				
	Great Deal		Some		None
	5	4	3	2	1
3. New (emerging) occupations	5	4	3	2	1
4. What future employers or educators will expect of me	5	4	3	2	1
5. Traditionally male jobs which females now enter	5	4	3	2	1
6. Traditionally female jobs which males now enter.	5	4	3	2	1
7. My own feelings about entering a job field, traditionally held by persons of the opposite sex	5	4	3	2	1
8. Occupations which have many job opportunities	5	4	3	2	1

- please go to next page -

	Great Deal 5	4	Some 3	2	None 1
. Occupations which are overcrowded with workers and job applicants	5	4	3	2	1
. Educational opportunities after high school	5	4	3	2	1
. How much training is needed to pursue my career goal and where to go to get it	5	4	3	2	1
.. Work and career opportunities available in the Fond du Lac area	5	4	3	2	1
. Education and training opportunities in the Fond du Lac area	5	4	3	2	1
. Jobs and types of careers related to my own career goal	5	4	3	2	1
. How choice of occupation may affect my life style--where I live, amount of free time, friends and fellow workers, etc.	5	4	3	2	1
. Other ______________________	5	4	3	2	1

-30.
o what degree did the Goodrich High program
rovide or improve your academic skills in

. reading	5	4	3	2	1
. math	5	4	3	2	1
9. writing	5	4	3	2	1
. study habits	5	4	3	2	1
. To what degree did the Goodrich High program provide or improve your vocational skills?	5	4	3	2	1

How good a job did the program at Goodrich High do in preparing or helping you:
(*Circle a number for each statement*)

	Excellent 5	Good 4	Average 3	Fair 2	Poor 1
2. Learn about my own career interests and abilities	5	4	3	2	1
3. Match my interests and abilities to possible career choice	5	4	3	2	1

- over please -

	Rating Scale				
	Excellent 5	Good 4	Average 3	Fair 2	Poor 1
. Know how to locate job sources	5	4	3	2	1
. Know how to apply and interview for a job	5	4	3	2	1
. Be ready to go on to more schooling . .	5	4	3	2	1
. Learn the skills needed for a job . . .	5	4	3	2	1
. Achieve needed academic skills	5	4	3	2	1
. Get along with others at work/at school	5	4	3	2	1
. Know how to use tools and equipment . .	5	4	3	2	1
. Improve my work habits	5	4	3	2	1
. Work in a supervisory or leadership role	5	4	3	2	1
. Understand the role of work in my own and others' lives	5	4	3	2	1
. Understand in general the U.S. economic system (supply/demand, inflation, recession, etc.)	5	4	3	2	1
. Other ______________________________	5	4	3	2	1

On the left, check (✓) the sources from which you received career education information. (Check all that apply.) THEN circle the number in the rating scale that shows the value of each source you checked.

			Rating Scale					
			Excellent 6	5	Adequate 4	3	Poor 2	None Received 1
-47.	_____	Coop program	6	5	4	3	2	1
-49.	_____	EBCE program and staff	6	5	4	3	2	1
-51.	_____	Work experience while in high school	6	5	4	3	2	1
-53.	_____	Club memberships and activities	6	5	4	3	2	1
-55.	_____	Counselor(s)	6	5	4	3	2	1
-57.	_____	High school teachers	6	5	4	3	2	1
-59.	_____	Regular classwork	6	5	4	3	2	1
-61.	_____	Employers and/or workers in business or industry	6	5	4	3	2	1

- please go to next page -

			Rating Scale					
			Excellent		Adequate		Poor	None Received
			6	5	4	3	2	1
63.	_____	Parents or guardians	6	5	4	3	2	1
65.	_____	Friends	6	5	4	3	2	1
67.	_____	Brothers or sisters	6	5	4	3	2	1
69.	_____	Others	6	5	4	3	2	1

. What effect might the type and amount of career information you got at Goodrich High have on you five years from now?

. Add any comments you would like about your educational experiences in the Goodrich High program.

Center for Vocational, Technical
and Adult Education
UW-Stout, Form 787.A1

1/17/79

EBCE Technical Assistance Evaluation Form

Directions: In order to improve the quality of technical assistance for Experience Based Career Education, you are asked to rate each item according to how helpful it was or will be to you in your role at your school.

KEY: N = Did not receive training on this subject
5 = GDH = Great Deal of Help
4 =
3 = H = Helpful
2 =
1 = NH = No Help

Circle the appropriate response.

ITEM	N	GDH 5	4	H 3	2	NH 1
● How helpful was the training session in:						
1. Explaining the concepts of Experience Based Career Education (EBCE)	N	5	4	3	2	1
2. Defining the terms and vocabulary of EBCE	N	5	4	3	2	1
3. Defining the role and responsibilities of each EBCE staff person	N	5	4	3	2	1
4. Giving guidelines to determine the number of students EBCE can serve per dollars available per grade level/or type of students served	N	5	4	3	2	1
5. Learning how to determine number of staff our school would need to conduct an EBCE program	N	5	4	3	2	1
6. Learning how to get an EBCE program started in our school	N	5	4	3	2	1
7. Learning ways of handling recruitment of students to EBCE	N	5	4	3	2	1
8. Learning how to translate EBCE experiences into course requirements	N	5	4	3	2	1
9. Learning about insurance coverage for EBCE	N	5	4	3	2	1

Form 787.A2

ITEM	N	GDH 5	4	H 3	2	NH 1
● How helpful was the training session in:						
10. Learning the process for placing students at work sites	N	5	4	3	2	1
11. Learning how to monitor attendance of students in EBCE	N	5	4	3	2	1
12. Learning how to manage the instructional component of EBCE	N	5	4	3	2	1
13. Answering your questions and/or those of other participants	N	5	4	3	2	1
14. Learning how to use the EBCE Inquiry process	N	5	4	3	2	1
15. Learning how to develop Student Activity sheets	N	5	4	3	2	1
16. Finding how to evaluate student progress	N	5	4	3	2	1
17. Learning how to handle EBCE recordkeeping of needs	N	5	4	3	2	1
18. Learning how to individualize instruction for each student	N	5	4	3	2	1
19. Learning how to use EBCE materials	N	5	4	3	2	1
20. Seeing how students' EBCE work parallels traditional courses in the curriculum	N	5	4	3	2	1
21. Learning how to use the Worker Trait Groups and Data/People/Things information	N	5	4	3	2	1
22. Learning how to incorporate Group, counseling, and/or other student support services in EBCE	N	5	4	3	2	1
23. Learning how student career guides are to be used	N	5	4	3	2	1
24. Learning how to manage day-to-day operation of EBCE	N	5	4	3	2	1
25. Learning how to assure and monitor student safety on the site	N	5	4	3	2	1
26. Learning how to develop site manuals--write task state-statements, etc.	N	5	4	3	2	1

Form 787.A3

ITEM		GDH		H		NH
	N	5	4	3	2	1
• How helpful was the training session in:						
27. Learning techniques for obtaining and retraining resource persons and sites .	N	5	4	3	2	1
28. Learning how to involve community persons in EBCE	N	5	4	3	2	1
29. Learning how to evaluate your own EBCE program	N	5	4	3	2	1
30. Learning how to modify or adapt the EBCE program to meet your special needs	N	5	4	3	2	1
31. Managing the administrative aspects of the EBCE program	N	5	4	3	2	1

32. At what stage is your school in adapting/adopting an EBCE program? (Check one)

_____ (1) Already involved in EBCE
_____ (2) Committed to EBCE
_____ (3) Considering it seriously
_____ (4) School is uncertain/undecided
_____ (5) School has decided not to try EBCE
_____ (6) I don't know

33. My own role in EBCE will be: (Check all that apply)

_____ (1) Director
_____ (2) Learning Coordinator
_____ (3) Experience Site Analyst
_____ (4) School Administrator
_____ (5) Community Council representative
_____ (6) Other ___________

Center for Vocational, Technical
and Adult Education
UW-Stout, Form 788.A1

End of Year Student Opinionniare

Directions: Read each statement below and check one of the following ratings to tell the degree of help the Experience Based Career Education (EBCE) program was to you.

KEY:

5 = SA = Strongly Agree
4 = A = Agree
3 = U = Undecided
2 = D = Disagree
1 = SD = Strongly Disagree

Circle the appropriate response.

STATEMENT ABOUT THE EBCE PROGRAM	SA 5	A 4	U 3	D 2	SD 1
• Being in the EBCE program:					
1. Gave me knowledge about the kinds of careers there are in the world of work	5	4	3	2	1
2. Has enabled me to make an almost certain career choice.	5	4	3	2	1
3. Gave me a great deal of knowledge about my own interests and/or abilities	5	4	3	2	1
4. Helped me match my interests and/or abilities to a career.	5	4	3	2	1
5. Showed me how to use sources of job information, locate jobs, apply and interview for them, etc.	5	4	3	2	1
6. Gave me specific skills I can use on the job . .	5	4	3	2	1
7. Helped to show the relationship between math, science, and English and tasks done on the job .	5	4	3	2	1
8. Gave me a better understanding of how business and industry operate.	5	4	3	2	1
9. Gave me a better understanding of the contribution business and industry make to Fond du Lac	5	4	3	2	1
10. My Learning Coordinator helped me a lot in his/her dealings with me.	5	4	3	2	1

over please . .

Form 788.A2

STATEMENT ABOUT THE EBCE PROGRAM	SA 5	A 4	U 3	D 2	SD 1
11. EBCE did an adequate job of meeting my academic needs	5	4	3	2	1
12. EBCE did an adequate job of meeting my social needs	5	4	3	2	1
13. EBCE did an adequate job of meeting my career education needs	5	4	3	2	1
14. The EBCE learning materials were very useful. . .	5	4	3	2	1
15. My experience with the EBCE program is likely to influence my career choice more than my paid work experiences	5	4	3	2	1
16. EBCE made it easy to see how class assignments apply to most jobs in the world of work	5	4	3	2	1
17. My high school program, especially this past year, has been very worthwhile	5	4	3	2	1
18. My experiences this year will help me in finding a job.	5	4	3	2	1
19. My school program has given me ample information on post-secondary educational opportunities	5	4	3	2	1

20. How long were you in the EBCE program? *(check one response)*

____ (1) First semester only
____ (2) Second semester only
____ (3) All year

21. What year are you in school? *(check one)*

____ (1) Junior
____ (2) Senior

22. Sex:

____ (1) Male
____ (2) Female

23. How could the EBCE program be improved? *(answer briefly)*

24. What were the most important things you learned while in EBCE? *(answer briefly)*

Thank you for responding.

Center for Vocational, Technical
and Adult Education
UW-Stout, Form 789.A1

End of Year Student Opinionnaire

Directions: Read each statement below and choose one of the following ratings to tell the degree of help Goodrich High School programs were to you.

KEY:

5 = SA = Strongly Agree
4 = A = Agree
3 = U = Undecided
2 = D = Disagree
1 = SD - Strongly Disagree

Circle the appropriate response.

STATEMENTS ABOUT THE GOODRICH HIGH PROGRAM	SA 5	A 4	U 3	D 2	SD 1
• The Goodrich Career Counseling program:					
1. Gave me knowledge about the kinds of careers there are in the world of work	5	4	3	2	1
2. Has enabled me to make an almost certain career choice.	5	4	3	2	1
3. Gave me a great deal of knowledge about my own interests and/or abilities.	5	4	3	2	1
4. Helped me match my interests and/or abilities to a career.	5	4	3	2	1
5. Showed me how to use sources of job information, locate jobs, apply and interview for them, etc.. .	5	4	3	2	1
6. Gave me specific skills I can use on the job . . .	5	4	3	2	1
7. Helped to show the relationship between math, science, and English and tasks done on the job . .	5	4	3	2	1
8. Gave me a better understanding of how business and industry operate	5	4	3	2	1
9. Gave me a better understanding of the contribution business and industry make to Fond du Lac.	5	4	3	2	1
10. My teachers and counselors helped me a lot in their dealings with me.	5	4	3	2	1
11. The Goodrich program did an adequate job of meeting my academic needs.	5	4	3	2	1
12. The Goodrich program did an adequate job of meeting my social needs.	5	4	3	2	1

over please ...

STATEMENTS ABOUT THE GOODRICH HIGH PROGRAM	SA 5	A 4	U 3	D 2	SD 1
13. The Goodrich program did an adequate job of meeting my career education needs	5	4	3	2	1
14. The career information in the Counseling Center was very helpful to me	5	4	3	2	1
15. My experience with the career education program is likely to influence my career choice more than my paid work experience.	5	4	3	2	1
16. It's easy to see how the classes I've taken in high school apply to most jobs in the world of work	5	4	3	2	1
17. My high school program, especially this past year, has been very worthwhile.	5	4	3	2	1
18. My experiences this year will help me in finding a job	5	4	3	2	1
19. My school program has given me ample information on post-secondary educational opportunities	5	4	3	2	1

20. What program are you in at Goodrich? *(check one response)*

____ (1) Vocational
____ (2) General
____ (3) College Prep

21. What year are you in school?

____ (1) Junior
____ (2) Senior

22. Sex:

____ (1) Male
____ (2) Female

23. Amount of work experience this year:

____ (1) None
____ (2) 1-5 hours/week (average)
____ (3) 6-10 hours/week (average)
____ (4) 11-20 hours/week (average)
(5) ____ 21-30 hours/week (average)
(6) ____ 31 or more hours/week (average)
(7) ____ Was employed in a cooperative work experience through a Capstone vocational course at Goodrich.

24. How could the programs at Goodrich High be improved to serve students better? *(answer briefly)*

25. What were the most important things you learned while at Goodrich? *(answer briefly)*

Thank you for responding

enter for Vocational, Technical
nd Adult Education
W-Stout, Form 790.A1

2/2/79

EBCE Presentation

Directions: Complete the following items based on your impression of the presentation on EBCE. Use the following responses.

N = Not applicable
NH = 1 = No help
2 =
H = 3 = Helpful
4 =
VH = 5 = Very Helpful

	Responses					
		NH		H		VH
	N	1	2	3	4	5
● How helpful was the presentation in:						
1. Explaining the concepts of Experienced Based Career Education (EBCE).	N	1	2	3	4	5
2. Defining the terms and vocabulary of EBCE	N	1	2	3	4	5
3. Describing how EBCE can be used in a ninth grade career education program .	N	1	2	3	4	5
4. Describing how EBCE can help to develop academic skills.	N	1	2	3	4	5
5. Learning how to start an EBCE program in my school agency.	N	1	2	3	4	5
6. Describing the role of business and industry in EBCE	N	1	2	3	4	5
7. Explaining the type of in-service needed to start an EBCE program. . . .	N	1	2	3	4	5
8. Defining the student outcomes from an EBCE program.	N	1	2	3	4	5
9. Explaining the relationship between classroom and work site experiences. .	N	1	2	3	4	5
10. Describing the site manuals and other materials used in EBCE	N	1	2	3	4	5
11. Learning how to obtain resource persons and sites.	N	1	2	3	4	5
12. Answering your questions and/or those of other participants.	N	1	2	3	4	5

Form 790.A2

	Responses					
	N	NH 1	2	H 3	4	VH 5
13. Other ____________________	N	1	2	3	4	5

14. Could EBCE be a relevant part of the program at your school/agency?

____ 1. No

____ 2. Do Not Know

____ 3. Yes

15. My present position is:

____ (1) Teacher
____ (2) Counselor
____ (3) Principal
____ (4) Superintendent
____ (5) School Board Member
____ (6) Community Representative
____ (7) State Agency Employee
____ (8) Other ____________________

16. If you are a teacher, counselor, or principal, at what grade levels, do you work? (Check all that apply)

____ (1) Elementary grades (K-6)
____ (2) Junior high (7-9)
____ (3) Senior high (10-12)
____ (4) Post-secondary

17. Comments/Suggestions:

PARENT OPINION SURVEY

1. How well does the EBCE Program compare overall with the past school experiences of your daughter or son?

Much Worse				Much Better
1	2	3	4	5

2. If you had it to do over again, would you want your son or daughter to participate in the EBCE Program?

Definitely NO				Definitely YES
1	2	3	4	5

3. How well do you think your son or daughter likes the EBCE Program compared with past school experiences?

Much Worse				Much Better
1	2	3	4	5

4. What do you think are the greatest weaknesses of the EBCE Program?

5. What do you think are the greatest strengths of the EBCE Program?

over

6. Have you received enough information about your son's or daughter's progress in the EBCE Program?

Definitely NO				Definitely YES
1	2	3	4	5

7. In comparison with regular schools, how much opportunity did the EBCE Program provide your daughter or son for learning about occupations?

Much Less				Much More
1	2	3	4	5

8. What effect, if any, has the EBCE Program had on helping your son or daughter form career plans?

Definitely Bad				Definitely Good
1	2	3	4	5

9. In comparison with regular schools, how much opportunity did the EBCE Program provide your daughter or son for general learning?

Much Less		About the Same		Much More
1	2	3	4	5

10. In comparison with past experiences in regular schools, how motivated is your daughter or son to learn in the EBCE Program?

Much Less		About the Same		Much More
1	2	3	4	5

11. How would you rate the approaches to learning used in the EBCE Program?

Poor				Excellent
1	2	3	4	5

12. What positive changes have you noticed in your son or daughter that might be a result of participation in the EBCE Program?

____

____

____

13. What negative changes have you noticed in your son or daughter that might be a result of participation in the EBCE Program?

____

____

____

14. How often does your son or daughter talk to you about what's going on in the EBCE Program?

Almost Never				Almost Daily
1	2	3	4	5

15. About how often have you had any contact with any EBCE Program staff members?

Almost Never				Very Frequently
1	2	3	4	5

16. How many meetings have you attended during this school year where other parents of EBCE students were present?

None	1	2	3	4 or More

17. How would you rate the general quality of the EBCE Program staff?

Poor				Excellent
1	2	3	4	5

CONTACT PERSON/RESOURCE PERSON QUESTIONAIRE

Name of Resource Person ______________________________

Name of Company ______________________________ Date ______________

Questions

1. Did the EBCE staff provide you with the necessary information to help you direct students' activities at your site?

1) ________ yes 2) ________ sometimes 3) ________ no

2.-6. Did the EBCE staff usually: (check all that apply)

2) Show you the Student Activity Sheet (s) ______________

3) Show you the Student Program Profile ______________

4) Show you the type of products expected from student ______________

5) Explain reason for the particular placement ______________

6) Provide you with feedback on student's progress ______________

7.-15. Which of the following supportive services do you (or others at your site) provide for the Experience Based Career Education (EBCE) program students? (Check each appropriate category.)

	Frequently (4)	Occasionally (3)	Seldom (2)	Never (1)
7) Do you talk about job opportunities?	____	____	____	____
8) Do you talk about the students' personal problems?	____	____	____	____
9) Do you talk about activities at your site?	____	____	____	____
10) Do you tutor in an academic area?	____	____	____	____
11) Do you evaluate individual students' assignments?	____	____	____	____

over

E.B.C.E. 3/29/77

	Frequently (4)	Occasionally (3)	Seldom (2)	Never (1)
12) Do you assist students in non-job related assignments?	____	____	____	____
13) Do you supervise students to perform a specific job-related task as your site?	____	____	____	____
14) Do you help plan student assigrments?	____	____	____	____
15) Other (specify) ________ ______________________	____	____	____	____

16.-22. How do students spend their time at your site? (Check each appropriate category.)

	Frequently (4)	Occasionally (3)	Seldom (2)	Never (1)
16) Observing site activities	____	____	____	____
17) Researching from site materials	____	____	____	____
18) Actively performing site activities	____	____	____	____
19) Talking with me	____	____	____	____
20) Talking with other site personnel	____	____	____	____
21) Individual study	____	____	____	____
22) Other (specify) ________ ______________________	____	____	____	____

23. Do you think the EBCE students have been interested in your site?

1) ________ yes 2) ________ don't know 3) ________ no

Explain: ____

____

24. Based on the EBCE students placed at your site, do you feel these students were interested in the concept of EBCE?

1) ________ yes 2) ________ don't know 3) ________ no

25. How have employees at your site reacted to the EBCE students placed at your site? ____

____

26. How has top level management reacted to the EBCE students placed here?

____

____

27. Have you been satisfied with the feedback that you received relating to what happens to the student after he leaves your site?

1)_______yes 2)_______don't know 3)_______no

Comment: ____

____

28. Do you think your company will continue working with the EBCE project during the next couple of years?

1)_______yes 2)_______don't know 3)_______no

29. Based on the students and staff you've met, how effective do you feel the program was? ____

____

30. Do you feel the program functioned as you were led to believe when you were recruited as an employer site?

1)_______yes 2)_______don't know 3)_______no

31. What do you feel the strengths of the EDCE program are?

____

____

32. What do you feel the weaknesses of the EBCE program are?

____

____

____

over

33.-48. To what extent has the EBCE Program had an impace on . . . . ?

Check appropriate responses in section (A) How much impact and (B) Value of impact for each statement

		(A) How Much Impact				(B) Value of Impace		
		Don't Know (1)	No Impact (2)	Some Impact (3)	Much Impact (4)	Bad Impact (1)	Don't Know (2)	Good Impact (3)
33.-34.	Quality of work performed by regular employees	___	___	___	___	___	___	___
35.-36.	Amount of work performed by regular employees	___	___	___	___	___	___	___
37.-38.	Company hiring practices	___	___	___	___	___	___	___
39.-40.	Company training practices	___	___	___	___	___	___	___
41.-42.	Other possible impacts (list)	___	___	___	___	___	___	___
43.-44.	___________	___	___	___	___	___	___	___
45.-46.	___________	___	___	___	___	___	___	___
47.-48.	___________	___	___	___	___	___	___	___

n to; Ron Nelson, Project Director
EBCE - Bragg School
161 East First Street
Fond du Lac, WI 54935

APPENDIX B

Analysis of Variance Tables

- The row Variable is treatment
  (EBCE = 1, Control = 2)
- The column Variable is Sex
  (Male = 1, Female = 2)

Reading (CTBS)

- **Pre-Test**

```
                         TWO FACTOR ANALYSIS OF VARIANCE

                 DEGREES OF
                   FREEDOM            SUM OF SQUARES      MEAN SQUARES
BETWEEN ROWS.         1
BETWEEN COLS.         1                  141.3250
INTERACTION           1                  216.9620            141.3250
ERROR TERM          102                   19.2345            215.9620
----------------------------------      5157.0200             19.2345
TOTAL               105 ----------------------------------    50.5590---------
                                        5534.5400


SIGNIFICANCE OF ROW VARIABLE
     F=   2.80    DF=  1 , 102
     THE EXACT PROBABILITY IS .09367
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL

SIGNIFICANCE OF COLUMN VARIABLE
     F=   4.29    DF=  1 , 102
     THE EXACT PROBABILITY IS .03838
     THIS IS SIGNIFICANT AT THE .05 LEVEL

SCHEFFE'S POST-HOC COMPARISON ON THE COL MEANS

MEAN OF COL 1  IS SIGNIFICANTLY DIFFERENT FROM MEAN OF COL 2

SIGNIFICANCE OF INTERACTION
     F=   0.38    DF=  1 , 102
     THE EXACT PROBABILITY IS .54589
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL
```

(Reading)

- Post-Test

```
                    TWO FACTOR ANALYSIS OF VARIANCE

                  DEGREES OF
                   FREEDOM             SUM OF SQUARES     MEAN SQUARES
BETWEEN ROWS.         1                     213.1960          213.1960
BETWEEN COLS.         1                       2.2522            2.2522
INTERACTION           1                      71.1426           71.1426
ERROR TERM           96                    5215.7500           54.7474
--------------------------------------------------------------------------
TOTAL                99                    5502.3400


SIGNIFICANCE OF ROW VARIABLE
     F=   3.29    DF=  1 ,  96
     THE EXACT PROBABILITY IS .06914
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL

SIGNIFICANCE OF COLUMN VARIABLE
     F=   0.03    DF=  1 ,  96
     THE EXACT PROBABILITY IS .84667
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL

SIGNIFICANCE OF INTERACTION
     F=   1.10    DF=  1 ,  96
     THE EXACT PROBABILITY IS .29746
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL
```

Math (CTBS)

- Pre-Test

```
                    TWO FACTOR ANALYSIS OF VARIANCE

                  DEGREES OF
                   FREEDOM           SUM OF SQUARES     MEAN SQUARES
BETWEEN ROWS.         1
BETWEEN COLS.         1                1927.3100          1927.3100
INTERACTION           1                  26.4492            26.4492
ERROR TERM          107                   0.0271             0.0271
                                       6414.6200            59.9497
--------------------------------------------------------------------
TOTAL               110                8368.4000


SIGNIFICANCE OF ROW VARIABLE
     F=  32.15     DF=  1 , 107
     THE EXACT PROBABILITY IS 0
     THIS IS SIGNIFICANT AT THE .01 LEVEL

SCHEFFE'S POST-HOC COMPARISON ON THE ROW MEANS
ENTER THE PROBABILITY LEVEL FOR SCHEFFE'S TEST, OTHERWISE .10 WILL BE USEI




ENTER THE F( .1 )VALUE FOR  1 AND 107 DEGREES OF FREEDOM? 2.77

MEAN OF ROW 1  IS SIGNIFICANTLY DIFFERENT FROM MEAN OF ROW 2

SIGNIFICANCE OF COLUMN VARIABLE
     F=   0.44     DF=  1 , 107
     THE EXACT PROBABILITY IS .5151
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL

SIGNIFICANCE OF INTERACTION
     F=   0.00     DF=  1 , 107
     THE EXACT PROBABILITY IS .98091
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL

READY
```

(Math)

- **Post-Test**

```
                     TWO FACTOR ANALYSIS OF VARIANCE

               DEGREES OF             SUM OF SQUARES    MEAN SQUARES
                FREEDOM
BETWEEN ROWS.      1                    635.1950          635.1950
BETWEEN COLS.      1                     40.0079           40.0079
INTERACTION        1                      2.5645            2.5645
ERROR TERM        97                   8730.7900           90.0082
-----------------------------------------------------------------------
TOTAL            100                   9408.5620


SIGNIFICANCE OF ROW VARIABLE
     F=    7.06     DF=  1 ,  97
     THE EXACT PROBABILITY IS .00905
     THIS IS SIGNIFICANT AT THE .01 LEVEL

SCHEFFE'S POST-HOC COMPARISON ON THE ROW MEANS

MEAN OF ROW 1  IS SIGNIFICANTLY DIFFERENT FROM MEAN OF ROW 2


SIGNIFICANCE OF COLUMN VARIABLE
     F=    0.44     DF=  1 ,  97
     THE EXACT PROBABILITY IS .51365
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL

SIGNIFICANCE OF INTERACTION
     F=    0.03     DF=  1 ,  97
     THE EXACT PROBABILITY IS .86063
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL
```

NOTE: The EBCE Mean was 8.38 less than the Control group mean on the pre-test and on the post-test the EBCE Mean was 5.77 less than the Control group mean.

Work Opinionnaire

- Pre-Test

```
                      TWO FACTOR ANALYSIS OF VARIANCE

                DEGREES OF
                 FREEDOM              SUM OF SQUARES    MEAN SQUARES
BETWEEN ROWS.       1                     0.1016            0.1016
BETWEEN COLS.       1                   216.0234          216.0234
INTERACTION         1                     0.7109            0.7109
ERROR TERM        100                  6442.5902           64.4258
-------------- ---------------------------------------- ------------
TOTAL             103                  6659.4102


SIGNIFICANCE OF ROW VARIABLE
     F=    0.00     DF   1 , 100
     THE EXACT PROBABILITY IS .96729
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL

SIGNIFICANCE OF COLUMN VARIABLE
     F=    3.35     DF   1 , 100
     THE EXACT PROBABILITY IS .06655
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL

SIGNIFICANCE OF INTERACTION
     F=    0.01     DF   1 , 100
     THE EXACT PROBABILITY IS .91305
     THIS IS NOT SIGNIFICANT AT THE .25 LEVEL
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(Work Opinnionaire)

- Post-Test

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                         TWO FACTOR ANALYSIS OF VARIANCE

                 DEGREES OF                  SUM OF SQUARES     MEAN SQUARES
                  FREEDOM
BETWEEN ROWS.        1                          54.8848            54.8848
BETWEEN COLS.        1                          26.6631            26.6631
INTERACTION          1                          51.9346            51.9346
ERROR TERM          53                        3310.8400            62.4686
------------------------------------------------------------------------------
TOTAL               56                        3444.3220


SIGNIFICANCE OF ROW VARIABLE
     F=    0.88     DF=  1  ,  53
     THE EXACT PROBABILITY IS .64472
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL

SIGNIFICANCE OF COLUMN VARIABLE
     F=    0.43     DF=  1  ,  53
     THE EXACT PROBABILITY IS .52337
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL

SIGNIFICANCE OF INTERACTION
     F=    0.83     DF=  1  ,  53
     THE EXACT PROBABILITY IS .6309
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL
```

Sex Role Stereotyping

- Pre-Test

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                    TWO FACTOR ANALYSIS OF VARIANCE

              DEGREES OF                SUM OF SQUARES     MEAN SQUARES
               FREEDOM
BETWEEN ROWS.     1                       41.2383            41.2383
BETWEEN COLS.     1                      246.4280           246.4280
INTERACTION       1                      209.0920           209.0920
ERROR TERM       52                     5888.0100           117.7600
-----------------------------------------------------------------------
TOTAL            53                     6384.7700


SIGNIFICANCE OF ROW VARIABLE
     F=    0.35     DF=  1 ,  50
     THE EXACT PROBABILITY IS .56358
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL

SIGNIFICANCE OF COLUMN VARIABLE
     F=    2.09     DF=  1 ,  50
     THE EXACT PROBABILITY IS .15066
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL

SIGNIFICANCE OF INTERACTION
     F=    1.78     DF=  1 ,  50
     THE EXACT PROBABILITY IS .18571
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL
```

Sex Role Stereotyping

- **Post-Test**

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                         TWO FACTOR ANALYSIS OF VARIANCE

                  DEGREES OF
                   FREEDOM           SUM OF SQUARES      MEAN SQUARES
 BETWEEN ROWS.        1
 BETWEEN COLS.        1               1447.1700           1447.1700
 INTERACTION          1                147.0700            147.0700
 ERROR TERM          96                618.1640            618.1640
                                     13212.6000            137.6312
--------------------------------------------------------------------------
 TOTAL               99              15425.0000


 SIGNIFICANCE OF ROW VARIABLE
       F=  10.51     DF=  1 .  96
       THE EXACT PROBABILITY IS .00201
       THIS IS SIGNIFICANT AT THE .01 LEVEL

 SCHEFFE'S POST-HOC COMPARISON ON THE ROW MEANS

 MEAN OF ROW 1  IS SIGNIFICANTLY DIFFERENT FROM MEAN OF ROW 2


 SIGNIFICANCE OF COLUMN VARIABLE
       F=   1.07     DF=  1 .  96
       THE EXACT PROBABILITY IS .30443
       THIS IS NOT SIGNIFICANT AT THE .05 LEVEL

 SIGNIFICANCE OF INTERACTION
       F=   4.49     DF=  1 .  96
       THE EXACT PROBABILITY IS .03442
       THIS IS SIGNIFICANT AT THE .05 LEVEL

 SCHEFFE'S POST-HOC COMPARISON ON THE INTERACTION MEANS

 MEAN OF ROW 1 COL 1  IS SIGNIFICANTLY DIFFERENT FROM MEAN OF ROW 2 COL 2
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(Sex Role).

Analysis of Covariance Comparing EBCE Students Completing the Program at the End of Semester 1 with Those Entering.

```
FACTOR 1  FACTOR 2    MEAN COV    STD COV  MEAN DATA  STD DATA      N

TOTAL     TOTAL         113.19      10.96     114.94     12.01     54
TOTAL     COL  1        110.50      10.29     111.59     11.01     22
TOTAL     COL  2        115.03      11.19     117.25     12.29     32
ROW  1    TOTAL         112.61      11.91     116.00     13.59     28
ROW  1    COL  1        107.92      12.30     109.92     13.77     12
ROW  1    COL  2        116.13      10.56     120.56     12.10     16
ROW  2    TOTAL         113.81      10.04     113.81     10.04     26
ROW  2    COL  1        113.60       6.52     113.60      6.52     10
ROW  2    COL  2        113.94      11.94     113.94     11.94     16


                 TWO FACTOR ANALYSIS OF COVARIANCE

               DEGREES OF          SUM OF SQUARES      MEAN SQUARES
                FREEDOM
BETWEEN ROWS.      1                   119.8720            119.8720
BETWEEN COLS.      1                    33.3252             33.3252
INTERACTION        1                    32.0230             32.0230
ERROR TERM        49                  2000.7800             40.8323
-----------------------------------------------------------------------
TOTAL             52                  2186.0000


SIGNIFICANCE OF ROW VARIABLE
     F=    2.94     DF=  1 ,  49
     THE EXACT PROBABILITY IS .08923
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL

SIGNIFICANCE OF COLUMN VARIABLE
     F=    0.82     DF=  1 ,  49
     THE EXACT PROBABILITY IS .62596
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL

SIGNIFICANCE OF INTERACTION
     F=    0.78     DF=  1 ,  49
     THE EXACT PROBABILITY IS .61608
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL
```

- Analysis of Covariance comparing students enrolled in EBCE during semester II only with those who enrolled for semester I only. Post-test data collected in May, 1979. Pre-test (covariance) data collected in January, 1978.

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FACTOR 1  FACTOR 2     MEAN COV    STD COV  MEAN DATA  STD DATA    N

TOTAL     TOTAL         114.94      12.01    117.56     11.75     54
TOTAL     COL  1        111.59      11.01    113.41     12.55     22
TOTAL     COL  2        117.25      12.29    120.41     10.35     32
ROW  1    TOTAL         116.00      13.59    116.00     13.69     28
ROW  1    COL  1        109.92      13.77    109.92     13.77     12
ROW  1    COL  2        120.56      12.10    120.56     12.10     16
ROW  2    TOTAL         113.81      10.04    119.23      9.20     26
ROW  2    COL  1        113.60       6.52    117.60     10.29     10
ROW  2    COL  2        113.94      11.94    120.25      8.54     16


                  TWO FACTOR ANALYSIS OF COVARIANCE

                 DEGREES OF
                  FREEDOM         SUM OF SQUARES       MEAN SQUARES
BETWEEN ROWS.        1
BETWEEN COLS.        1              313.2580             313.2580
INTERACTION          1               50.3481              50.3481
ERROR TERM          49                1.3579               1.3579
                                   1537.0600              31.3686
---------------------------------------------------------------------
TOTAL               52             1902.0300


SIGNIFICANCE OF ROW VARIABLE
     F=   9.99     DF=  1 ,  49
     THE EXACT PROBABILITY IS .00302
     THIS IS SIGNIFICANT AT THE .01 LEVEL
ADJUSTED ROW MEANS
      1          2
   115.11     120.19

SCHEFFE'S POST-HOC COMPARISON ON THE ROW MEANS

MEAN OF ROW 1  IS SIGNIFICANTLY DIFFERENT FROM MEAN OF ROW 2


SIGNIFICANCE OF COLUMN VARIABLE
     F=   1.61     DF=  1 ,  49
     THE EXACT PROBABILITY IS .20867
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL

SIGNIFICANCE OF INTERACTION
     F=   0.04     DF=  1 ,  49
     THE EXACT PROBABILITY IS .83038
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL
```

Student Attitude Scale

- Pre-Test

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                        TWO FACTOR ANALYSIS OF VARIANCE

                DEGREES OF
                 FREEDOM             SUM OF SQUARES     MEAN SQUARES
BETWEEN ROWS.       1
BETWEEN COLS.       1                 1313.7200          1313.7200
INTERACTION         1                 5583.9400          5583.9400
ERROR TERM        104                    7.5938             7.5938
----------------------------------    77912.9000           749.1620
TOTAL                 ---------------------------------------------------
                  107                 84818.1000

SIGNIFICANCE OF ROW VARIABLE
     F=   1.75     DF=  1 , 104
     THE EXACT PROBABILITY IS .18516
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL

SIGNIFICANCE OF COLUMN VARIABLE
     F=   7.45     DF=  1 , 104
     THE EXACT PROBABILITY IS .00742
     THIS IS SIGNIFICANT AT THE .01 LEVEL

SCHEFFE'S POST-HOC COMPARISON ON THE COL MEANS
ENTER THE PROBABILITY LEVEL FOR SCHEFFE'S TEST, OTHERWISE .10 WILL BE USE
ENTER THE F( .1 )VALUE FOR  1 AND 104 DEGREES OF FREEDOM? 2.75

MEAN OF COL 1  IS SIGNIFICANTLY DIFFERENT FROM MEAN OF COL 2

SIGNIFICANCE OF INTERACTION
     F=   0.01     DF=  1 , 104
     THE EXACT PROBABILITY IS .91673
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL
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(Student Attitude Scale)

● Post-Test

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                         TWO FACTOR ANALYSIS OF VARIANCE

                DEGREES OF                SUM OF SQUARES     MEAN SQUARES
                 FREEDOM
BETWEEN ROWS.       1                  % .128628E 8         % .128528E 8
BETWEEN COLS.       1                  % .120759E 8         % .120759E 8
INTERACTION         1                  % .137277E 8         % .137277E 8
ERROR TERM         95                  % .801891E 9         % .844096E 7
---------------------------------------------------------------------------
TOTAL              98                  % .840558E 9


SIGNIFICANCE OF ROW VARIABLE
     F=   1.52      DF=  1 ,  95
     THE EXACT PROBABILITY IS .2177
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL

SIGNIFICANCE OF COLUMN VARIABLE
     F=   1.43      DF=  1 .  95
     THE EXACT PROBABILITY IS .23268
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL

SIGNIFICANCE OF INTERACTION
     F=   1.53      DF=  1 ,  95
     THE EXACT PROBABILITY IS .20255
     THIS IS NOT SIGNIFICANT AT THE .05 LEVEL
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